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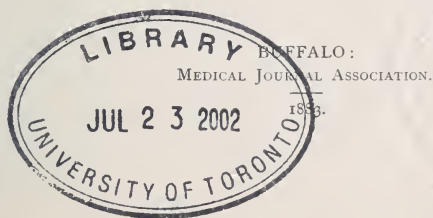
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VOL. XXII.

AUGUST, 1882, TO JULY, 1883.



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No. 1.

Original Communications.

SPINAL EXTENSION BY SUSPENSION.*

BY BERNARD BARTOW, M. D.

The idea advanced in connection with the plaster-of-Paris jacket for the treatment of vertebral caries, viz., to correct spinal mal-position by suspension of the patient, previous to the fixation of the spinal column with the plaster bandage, has been before the profession long enough to determine upon what merit the practice stands. Regarding the correctness of the principle involved in the plaster-of-Paris jacket for effecting spinal fixation, and immobility of the diseased vertebræ, there is no dissent; of the value of forced spinal extension as a preliminary measure, there has been a free expression of opinion as to its correctness, employed in the manner recommended by its author. Notwithstanding this, it is a matter of surprise at this time, that there should be medical men imbued with sufficient faith in, or possessing such false conceptions of, a particular plan of treatment, as to believe that an angular deformity of a part of the spinal column, is capable of being restored without injury to the patient; who can see nothing irrational in a plan of treat-

*Read before the Buffalo Medical Club

ment, that by forcible spinal stretching attempts, apparently, to diminish the curve in a part of the column, the result of a destructive disease of some of its bones. That there are medical men who hold such views, and practice in accordance with them, has been frequently verified in my experience; such conclusions have been formed, in part, by their expression of opinion, and the results of their practice, and in part, by the statements of patients regarding the manner of their treatment previous to coming under my care. I have seen several bad results following suspension in spinal caries; in each instance there was increased inflammatory action at the seat of disease, and, notwithstanding the application of the plaster jacket, increase of the angular deformity. The statements that are commonly made to me by patients who have been treated by this method, are, that the suspension was carried to the point fully to lift them off their feet, that it was painful, that fainting followed in some instances, and, that after several weeks they were worse than before the treatment was begun. Making due allowance for changes incident to the natural course of the disease, I am forced to believe that there is a large proportion of truth in such statements; that an amount of injury has been inflicted upon persons with spinal caries, directly due to the forcible extension so indiscriminately practiced in every case that has the semblance of spinal disease, previous to applying the plaster of Paris jacket.

The cause for such wide misapplication of what, properly used, is a valuable adjunct to the mechanical treatment of spinal disease, is due, it seems to me, to two facts: 1st, indefinite ideas on the part of many practitioners of the nature and effect of vertebral osteitis, and an inability to recognize the different stages of the disease; 2nd, to the imperfect manner in which the method of treatment that includes suspension, has been promulgated. Of the former, it is to be deplored that there are many physicians who fail in the recognition of spinal disease in its early stage. With little appreciation of the loss that follows to the patient from this oversight, the disease is permitted to progress until

permanent deformity, more or less extensive, has shown itself; then the diagnosis is made, and often it is considered to have been an early diagnosis of the disease, and as such, offering advantages in the matter of preventing deformity. With such views of a case, is it surprising that the same practitioner, having faith in himself to follow to the letter the rules of treatment, should hang up his patient by the head and axillæ, stretch out the spine until all trace of deformity has been removed, encase him in plaster-of-Paris bandages, and then congratulate himself on the good result he is taught to expect? In regard to the 2nd, Dr. Sayre (who has given the impetus to this mode of treatment) in his book, "Spinal Disease and Spinal Curvature," (page 8), says: "The patient should not be permitted to assume the upright position before he has been fitted with some artificial support capable of removing all pressure from the bodies of the diseased vertebræ. This object may be accomplished by *straightening** the spinal column in such a manner that the weight of the body is borne by the transverse processes." Speaking of lifting apart the bodies of the diseased vertebræ by mechanical appliances (page 8), he says: "This can be done only by an accurately fitting apparatus applied to the body itself when *extended*."* Describing the method of measuring the abnormal curves before and during suspension, with a view to showing the improvement in spinal position, due to suspension, (page 15), he says: "Thus we have a means by which comparison can be made, and are enabled to determine exactly what changes have taken place in the *curve*."* In making spinal extension by suspension with the head-and-chin collar and axillary supports, he recommends that the patient should be "gradually drawn up until his feet swing just clear of the floor."

Although Dr. Sayre appends a word of caution upon the impossibility of attempting to straighten curved spines due to caries, in which reparative processes are active, or have consolidated the bones, he nevertheless, by his illustration of the subject,

*Italics mine.

shows advanced caries of the spine subjected to the suspension treatment, previous to application of the plaster jacket. Further, there is nothing mentioned by him, to indicate to those following his instructions, that there is a period of the disease in which there is *no* angular projection of a vertebræ; that there is *no* period after posterior projection of a spinous process has shown itself, however small the deformity may be, when repairative efforts are not active; that suspension, in the manner advised, any time after posterior projection has taken place, might seriously disturb processes that are essential to the arrest of the disease. No reference is made to secondary or compensating curves that are induced in normal portions of the column, their effect to increase the deformity, or how, by their removal, the permanent deformity is *apparently* lessened.

The inferences to be drawn from Dr. Sayre's statements, by one who was relying upon his teaching for a knowledge of the subject, would be: That the improvement of spinal position induced by suspension, was due to a change in the direction of the vertebræ adjacent to and including the seat of disease; that a lifting apart, or separation, of the surfaces of the vertebral bodies most intimately involved in the carious process was to be effected by suspension—producing a gap on the anterior aspect of the column. A somewhat similar idea is expressed by Barwell.* Referring to Dr. Sayre's method, he says: "The idea is simple enough, merely to suspend the patient for a few minutes by the arm-pits and head, so that the weight of the lower limbs and buttocks shall *straighten out*† to some considerable degree the bend in the spine."

It is no exaggeration to say that the views of the majority of practitioners, as derived from these teachings, are in accord with the inferences just mentioned. As opposed to such teaching, it seems almost superfluous to direct attention to a few cardinal facts in the pathology of the disease; That absorption of part or whole

*Curvatures of the Spine, Lond., 1877.

† Italics mine.

of a vertebral body necessitates proportionate posterior projection of its spinous process; That there are present from the early stage of the disease until consolidation of the carious bones is effected, conservative processes of an inflammatory nature, affecting the periosteum, ligaments, etc. contiguous to the seat of disease, whose tendency is to immobilize that part of the column; in the natural course of the disease those efforts are usually inadequate to its arrest, but deformity being present, nothing should be done to disturb those attempts of nature to oppose the progress of the disease; That an abnormal angle assumed by the diseased vertebræ must be allowed to remain,—apposition of the surfaces of the carious vertebral bodies being essential to union and firm ankylosis of the parts; That improvement of spinal mal-position due to caries can, properly, take place by correcting compensating curves only. Such facts seem wholly to have been lost sight of, in the rush for brilliant results, in the treatment of this affection, instead of accepting deformity, when present, as a necessary evil, and turning attention to its prevention rather than its cure.

The rule, given by Dr. Sayre, for suspending a patient with spinal caries, is a dangerous one for general application, even with such protective modifications as have been added to it; for, in the present state of the matter, it is probable that in eighty per cent. of the cases so treated, there would be angular deformity present, in varying degrees, at the commencement of treatment.

There is but one stage of vertebral osteitis, in which suspension, as he recommends it, would be admissible, viz., before absorption begins in the vertebral body, or cartilage; previous to the occurrence of absorption there is lordosis, induced by reflex irritation, that can be wholly overcome by suspension, without danger of aggravating the inflammatory action that, in a little more advanced stage of the disease, constitutes a strong objection to its use. Slight abnormal projection of a spinous process, ensuing upon lordosis, points directly to commencing destruction of a vertebral body, and is an indication for ex-

treme care in the use of a force that may violently disturb the parts. With patients who have pronounced angular curvature, of whatever degree, it is *never* necessary to suspend them so that the feet swing clear of the floor; it is rarely necessary even to raise them off their heels to correct compensating curves. As a rule it will be found that by a forced muscular effort to erect his spine, the patient can improve its position quite as effectually as by employing suspension.

Previous to the application of a fixation apparatus, such improvement of spinal position as a case permits, can be accomplished by directing the patient to erect his spine, giving him at the same time slight axillary support.

By these means, the plaster-of-Paris bandage can be applied with all the advantages the method admits, while the danger of possible harm to the patient is wholly removed. In children too young to assist themselves, it is necessary for the surgeon to determine the degree of suspension to be used. In a case of slight angular projection of a spinous process, there will be a temptation to suspend the patient to the extent to cause *all* deformity to disappear; this, from the yielding character of the tissues, can be easily accomplished, but the evil of such a course will be seen in the certain increase of the inflammatory action that will shortly ensue. It is a nice point, therefore, in such an instance, to decide upon the degrees of force with which suspension should be exerted. The only arbitrary rule that can be stated safely, is:—Avoid disturbing an *angle* in the vertebral axis. This may be formed by the projection of but one spinous process, but nevertheless, it is a *sure* indication of loss of tissue in one, or between two vertebral bodies. The continuity of the anterior segment of the column can be secured only by permitting the fusion of two vertebral bodies, in one or both of which the disease may be located. A method of treatment that contemplates anything but this, is devoid of safety and reason. It is earnestly to be desired that more attention be given to the early recognition of this disease, that event alone

holding out a reasonable expectation of success in the prevention of deformity. As a rule, these cases, in their incipency, come under the notice of the family physician, and it is with him that much of the responsibility rests as to the future comfort or unhappiness of the patient.

THE PRESENT STATUS OF MEDICINE AND ITS RELATION TO THE
COMMONWEALTH IN THE FUTURE.*

BY F. J. BAKER, M. D.

It will be at once seen that I have entered fields well nigh boundless. The history of medicine would make a library of itself: while preventive medicine, which is the medicine of the future, with its far-reaching laws of sanitation, would require volumes for the bare enunciation of its principles.

I shall claim then to do nothing more than touch upon some salient points as I go along, and indicate, briefly, what, it seems to me, awaits our profession in the world's to-morrow.

First, The Present Status of Medicine.

a, We possess but little *positive knowledge* in regard to the *nature* of disease.

Take diphtheria for illustration. Recent investigations by Klebs, Pasteur, Wood, Formad, and others, indicate that diphtheria is an infiltration of living tissue with micrococci, and that their development is intimately associated with the morbid process. Some observers have endeavored to establish an identity between diphtheria and croup, while the weight of evidence would seem to be against this affinity, since croup is proved to be a sthenic, while diphtheria is undoubtedly an asthenic disease. But while hundreds of cases have been brought forward to prove that diphtheria has been produced by a medium capable of carrying micrococci—as milk—and which, on examination, was

*Read before the Niagara Co. Medical Society, by F. T. Baker, M. D., retiring President, and published by request of the Society.

found to be filled with these parasites, Dr. Jacobi, in his recent work on this disease, comes forward and takes ground against the germ theory. And so one man, or set of men, erect a structure of experiments and place on its top the resultant fact; when along comes another investigator, with name and fame, who, with one blow topples the structure to the ground.

Perhaps instead he rears one of his own, and thereby makes "confusion worse confounded." Or very likely he leaves us without any explanation, so that we are at great loss whom to believe, or whether we had best believe at all.

But while we have no accurate knowledge concerning the nature of the causative agent of diphtheria, the weight of evidence is in favor of the theory that the disease is caused by the entrance into and the development and multiplication of micrococci or parasitic vegetable bodies in the system. Klebs and Tommasi-Crudeli claim to have discovered the minute organisms which give rise to malarial fevers. Dr. Geo. Sternberg, Surgeon U. S. A., steps forward and claims, in an independent series of investigations, conducted by himself, that the evidence upon which these investigators based their claim to a discovery, is not well founded.

Still enough has been learned to make it more than probable that the "etiology of these fevers is connected directly, or indirectly, with the presence of these organisms, or their germs, in the air and water of malarial localities."

Typhoid and typhus fevers, and scarlatina are engaging the full attention of these patient workers, and it gives great hope that the mystery of causation is to be unraveled when we make mention of such well-known names as Touissant, Koch and Lister—in addition to those already referred to—engaged in their laborious researches. But enough has been said touching our want of accurate knowledge as to the true nature of disease, particularly those we call zymotic, to make plain the sequence, viz.: *b*. That our treatment of disease at present must be largely symptomatic. Nearly every remedy in the Dispensatory has

been at times vaunted as useful in diphtheria, and so of every disease known to us. This will continue so long as the specific cause is unknown. Then all will be changed; for ground will have been found upon which to base a rational and successful therapeutic course. *c.* While we are in the dark in regard to the exact *nature* of diseases, the conditions under which they are developed, are quite largely known, and are, therefore, preventable. Under the application of efficient sanitary laws we learn that in Memphis the decrease in deaths from infectious diseases during '81 as compared with '80, was 73 per cent.; in Chicago, 1.12; in Cincinnati only 48 per cent.; while in New York, Brooklyn and Philadelphia, where sanitation has not received much attention of late, the *increase* of deaths stood respectively 2.06 per cent., 1.65 per cent., and 2.68 per cent.; in Memphis during the first quarter of '80 the death-rate from diarrhœal diseases was 1.19 per 1000; for the same period of '81 it was 0.59, a decrease of 50 per cent. What a contrast with the death-rate of that city (Memphis) for the three years previous to 1878 when the yellow fever epidemic prevailed there!—and all this brought about by restoring that city on sound sanitary principles. It is hardly probable that the scourge of 1878 will be repeated so long as these principles are enforced. We are rarely called upon to see a case belonging to the infectious class, but that a careful investigation will reveal the source of the infection, and the practical point of this is that in nearly every instance a proper regard to sanitary laws would have prevented such disease. To sum up then in brief this part of my subject, we would say that, as physicians, we do not as yet possess an intimate acquaintance with the active causative agents of infectious diseases. It is likely that diphtheria and scarlatina are caused by minute organisms, called micrococci, and that they are produced as the direct result of vegetable decomposition.

It is highly probable that typhus and typhoid have their origin also in an infectious animalculæ—the bacilli. One party

holds that these originate in the decomposition of organic substances, and the other that they originate in the decomposition of these substances only when these decomposing substances are mixed with the germs of the specific typhus or typhoid poison, and when these germs grow and multiply, While it is held that the specific poison giving rise to typhus and typhoid, is quite identical in nature, why so great difference in its mode of manifestation?

Whoever touches or comes near to a case of typhus is in danger of contagion. The greater number of physicians and attendants who care for such invalids are themselves attacked by the disease—while, as a matter of fact, typhoid, in reality, is never directly transmitted from person to person. Physicians and nurses who take care of typhoid patients are no more frequently attacked with the disease (according to Liebermeister) than are persons who have never seen such cases. No one has yet been able to demonstrate any distinctive difference between the parasite giving rise to diphtheria on the one hand, and scarlatina on the other, but they bear no relation to each other only that both are alike highly infectious. If Klebs and Tommasi-Crudeli have failed satisfactorily to prove that some of the organisms found in the swamp-mud and gutter-water about New Orleans are the true bacillus malarie—and which Klebs succeeded in cultivating—and if they *have* failed to show conclusively that these organisms, when injected beneath the skin of a rabbit, give rise to a malarial fever corresponding with the ordinary paludal fevers to which man is subject; I say if they have not succeeded in demonstrating all this, they have, without doubt, opened the door to a series of investigations which will result in a correct solution of the problem. We know not yet the nature of the contagious principle of measles. Shall we accept the view of Home, Speranza, Bufalini, Locatelli, Rossi, Mayr, Wendt and a host of others, who hold that in this disease cocci exist in the blood, tears, saliva, mucus from the nose, and even in the branny desquamation of the skin; and that by

inoculation with either of these, the disease may be transmitted like small-pox?

Or shall we hold with Salisbury, who ascribed measles to a fungus spore found upon decaying straw; and who succeeded in producing an exanthem bearing a close resemblance to measles by inoculations with this parasite? May not both, or all, be quite right?

The answer will come at some future time.

Let us now consider for a few minutes the second division of the subject: "The Relation of Medicine to the Commonwealth of the Future."

Without doubt the future of medicine is glorious. Its past has been most honorable, as step by step it has emerged from the mists of ignorance and superstition. But its readings and its working have been in the dark; still light has been let in upon its path all along its history, and in its gleams wonderful strides have been made toward the dawn. Its present is indeed grand as in laboratory and clinic patient workers, in every land and clime, are tugging at this mighty problem of disease—its cause, and how its deadly onslaughts may be met.

But it remains to the future to realize the mission of medicine in all its lofty conceptions.

Some investigator is to tell us, by and by, whether zymotic diseases have their origin in special animal or vegetable growths. He is going to produce these growths artificially, outside the body. And then he will take them to his laboratory, and by repeated experiment finally decide upon some drug, capable of destroying their vitality. It will then remain for extended clinical research to determine whether or not this parasite will still retain its destructive power when it meets these organisms in the system, surrounded and influenced, as they must be, by all the conditions they find therein. Salicylic and carbolic acid, and other disinfecting agents, will destroy these animalculæ, but the system cannot bear them in doses sufficiently large to act effectually as physiological antidotes. The reproduction of these low organisms is so rapid that if the acids above mentioned

should "be administered internally, as often, and in doses sufficient to fulfill their indication, the remedy would become almost more destructive and dangerous to the system than the infectious animalculæ, the micrococci, or the bacilli." But here we have to thank Klebs for an important discovery. "He found that the benzoate of sodium or of magnesium destroys the bacilli of typhoid fever, while, in very large doses, it does not act deliteriously on the system." He proved the efficacy of the remedy, or specific, in the case of one of the workmen in his own laboratory, who was taken sick with typhoid from exposure to the bacilli, while being occupied with their culturing. Nine days treatment with the benzoate of sodium in the form of injection, mouth-wash, gargle, by inhalation and by internal administration, in doses of about 20 grs. every two hours, caused the fever, with every other symptom totally to leave him.

About 320 grams of the remedy were given daily to the patient by the different modes of its application. The only sequela of which the patient complained, was a rather remarkable weakness for several weeks.

Without doubt the near future will bring to us antidotes—perfectly harmless to the different structures of the body—fully competent to destroy the various parasites giving rise to zymotic diseases. The following colloquy from *Punch* has much of truth, as the future will reveal it, running through its humor, (it represents a customer at the counter of the chemist.) Says customer: "My nephew is just starting for Sierra Leone, and I thought I could not make him a more useful present than a dose of your best yellow fever. Would you tell me the price, please?" Chemist: "Well, m'am, the germs are so difficult to cultivate in Europe that I would advise your waiting for the next West Indian mail, when I am expecting a nice fresh consignment from St. Thomas. Meanwhile we could recommend our half-guinea traveler's assortment of the six commonest zymotics, and could add most of the tropical diseases from stock at five shillings each. We have some nice Asiatic cholera, just ripe, but they are more expensive."

Specific medication will not then be a chimera, nor will he who professes and practices it be dubbed a charlatan. But a higher position than this awaits the physician of the future. As the war-horse scents the battle afar off, so will the keen-eyed, alert physician discern in earth and air, and sky, portents of disease. His words of warning and advice will reach every hearth-stone where he reigns as arbiter of health, so that back of effect, and back of cause the antidote may be applied. Censure will surely attach to him if disease invades before the warning comes.

As the physician justly merits, and quite generally receives discharge, who fails to recognize a well-marked, familiar disease, *then* his services will be no longer wanted if he fails to *anticipate* disease. I do not *know*, but I think that in that truer time to be a doctor so-and-so, will be honor enough for any man. No *ic* or *pathy* will be appended to add luster to his name or calling. Potencies, nor active principles, nor mineral, nor herb shall draw invidious lines. In solid phalanx shall the healers stand. Death will not then claim one-third the race before the age of five. Schools and colleges will not then be approved and ingeniously applied machines where health and vigor is crowded out as knowledge is crammed in.

Extensive life will grow at the expense of the *intensive*. Physiology and hygiene will be taught and understood. *Then* a sound preliminary education will be required of each applicant at the threshold of our medical colleges. The term of study will be extended and the course thoroughly graded. The different chairs will be well endowed, and it is more than likely that all temptation to the granting of degrees will be removed from the schools and vested in State Boards.

This change is not to be brought about in a day, nor by a feeble, spasmodic allegiance to a code of ethics; nor by revolutionary measures relating to such code; but in years patiently spent in attaining to a high mental, moral and professional excellence.

A CASE ILLUSTRATING THE IMPORTANCE OF DIAGNOSIS.

BY H. R. HOPKINS, M. D.

The following case illustrating the importance of diagnosis, may be of interest. It may be said that it is not all necessary to enforce the application of a principle, which commands the ready assent of every member of the profession, and upon the subject I would like to say, that it seems to me, that we are quick enough to admit the general principle, but that many of us are very remiss in putting this principle into action in our individual cases. Among our busy men, how many will be found who hold themselves accountable for making an exhaustive examination, and an exact diagnosis in each case that comes under their observation, is not the habit quite too common of making just sufficient examination to enable one to exclude certain formidable troubles, which might stand as a cause of the symptoms presented, coupled with the further habit of ordering an expectant treatment, and then waiting in a lazy way for time to clear the obscurities. My opportunities for observation upon the habits of some of our leading men, by no means the chief of sinners, forces me to consider this one of the mental habits we should constantly strive to avoid. Aside from the wrong we do our patients, by not giving them the advantage of an intelligent and exact diagnosis, and a suitable treatment and prognosis, which can only be predicated upon such a diagnosis, we commit even a greater wrong upon ourselves by allowing the mind to get into that lazy, misty emasculate condition, in which vigorous, virile, constructive thought becomes impossible.

Is it not true that the real hold the medical profession, as opposed to the empirics, have upon the confidence of the public, is in the power of early and intelligent diagnosis and prognosis?

These thoughts, perhaps very crude and inconsequential, were called to my mind by a fortunate diagnosis, the result of accident which I made upon the following case.

Was called to see J. B., aged 73, laborer, in the forenoon of the 1st inst. He had worked as usual the previous day, which had been quite warm and he had perspired quite freely and drank an unusual quantity of ice water. Went to bed as usual and was wakened in the night with pain in the abdomen, about the navel, soon followed by copious diarrhœa and vomiting. Had six or eight liquid stools with considerable tenesmus.

About daylight the diarrhœa ceased, but the vomiting still continued, attacks coming about every twenty minutes. He was in bed with a cool, moist skin; normal heat and pulse; no pain; a little tender over the belly. I made in advance a diagnosis a mild gastro-enteritis, but proceeded to a more thorough examination, as the man had called at my office a fortnight before, complaining of swelling of his feet, and I thought examination would reveal a diseased liver.

Upon laying bare the belly, I saw a lump as big as half a hen's egg in the right groin, about the middle, and just below Poupart's ligament. This moved easily under the skin, which was free from discoloration, was not tender nor painful. He thought the lump was not there the day before, that it must have come in the night, and was sure it was of no account.

Upon close examination I found that, while the lump seemed to move under the fingers quite freely, this movement was confined to its more prominent or superficial portion; that it had a base quite deeply seated and firmly fixed. Upon once more interrogating the patient and his attendants, I found that the vomit for the few last times had a very strange odor, almost like the stool. The diagnosis of strangulated femoral hernia was made and ice applied to the lump. As soon as it could be arranged, about three hours, Dr. Folwell saw the case in consultation and confirmed the diagnosis. The arrangements for operating were made, when the formal employment of taxis was observed, much to our surprise with entire success. The relief of all symptoms was immediate and complete, and on the 4th of July, three days afterwards, I saw him in our procession

with a banner, saying that "he had worked for the same person for over 32 years."

Here was a case in which the data for diagnosis were present and ample. In fact, the danger of not making a correct diagnosis came from the profusion of symptoms. Without the observation of all the facts the diagnosis of gastro-intestinal irritation would, undoubtedly, have held long enough to have lost the chance of saving the man's life.

With this erroneous diagnosis, once put into effect, the chance of correcting the error would rest mainly upon the opportunity to observe the nature of the vomit, which might not occur in at least 24 or 48 hours. If the odor was simply suspicious, the suspicion would be dismissed in view of the history of diarrhœa, making a strong presumption against a hernia. Without the knowledge of the presence of the lump in the groin, the symptoms arranged themselves in perfect order about the idea of gastro-intestinal irritation, while, with that knowledge, they grouped just as handily about a quite dissimilar cause and thus formed an altogether different case. If one had not made the diagnosis by accident, they would be tempted to point out the helplessness of the empirical method of treating symptoms in the face of this and similar cases.

Clinical Reports.

COMPLETE PLACENTA PRÆVIA.

BY P. W. VAN PEYMA, M. D.

On the evening of the 16th of May, I was called by Mrs. O., a midwife, to see Mrs. G., in labor with her seventh child. I was informed by the midwife of the abnormal condition, and upon examination with the hand entirely within the vagina, I was unable to feel any part of the child. The os uteri was dilated to a diameter of about two inches and was further dilatable.

The entire opening was covered by the placenta. The patient's condition was on the whole favorable; the pulse, though rapid and weak, was not remarkably so. The loss of blood had not been excessive. On introducing the hand, for the purpose of turning, I failed to find any part of the os uncovered, and therefore, in order to reach the cavity of the uterus, I decided to perforate the placenta with my hand. This was accomplished without great difficulty, and although it proved a head presentation, the feet were easily reached and version readily accomplished. The child and placenta were delivered at the same time. The child, although showing some signs of life, we were unable to resuscitate, its death being apparently due to loss of blood. The mother was convalescent within the usual time, and has since been perfectly well. In relation to this case I will simply add that while cases of complete placenta prævia are rare, it is my experience that partial placenta prævia is comparatively common.

DELIVERY AT SIX MONTHS WITH MEMBRANES UNRUPTURED.

I was called during the night of July 17th, to attend Mrs. B., in labor for the fourth time; previous parturitions normal. On arriving at the house and making an examination, I discovered protruding from the vulva a smooth amniotic sac containing the foetus. Upon applying slight traction by means of a towel wrapped around the mass, it was easily removed. The uterus immediately contracted firmly and so continued. Upon examination of the sac and contents, it was found to be the entire unruptured amniotic sac containing the dead foetus as well as placenta, &c. The contents were easily recognized on account of the translucency of the membranes. The mother's last menstruation occurred more than six months previous, and the foetus had the appearance of having passed that age. Although similar cases have been reported, yet the literature upon the subject is exceedingly scanty and the cases very rare.

Selections.

THE BROMIDES IN INEBRIETY.

The withdrawal of alcohol in inebriety is followed by many and often grave nervous disorders, for which the bromides are found most specific. The reflex action of the spinal cord is depressed by this remedy, until the system can accomodate itself to the new conditions. Nervous activity is lowered, and all nerve force is diminished. How far this can be used with safety must be determined in each case. This remedy is literally dangerous in its indiscriminate use for disorders following the withdrawal of alcohol. Its effects are uncertain, and can with difficulty be controlled. They are of degrees merely, ranging all the way from mild sleep, to stupor, unconsciousness, and delirium. Sometimes they act quickly, then their action is delayed and cumulative. Bromide of ammonium is now more commonly used, because it contains more bromine. For the symptoms which follow the removal of alcohol, this drug is usually given in forty or fifty grain doses, often repeated, until the patient is quiet. Some physicians give one hundred grains every hour, until sedation is secured. Cannabis indica, hyoscyamus, and digitalis are often combined with this drug, and the effects are still more uncertain. The great danger comes from over sedation, with the consequent hyperaemiaes and anaemiaes, and in cases of inebriety both of these conditions may be present and still further increased by this drug. In some cases bromides may be very dangerous in still further depressing vital energies, that are already worn out. Some years ago I gave the bromides in this state, fearlessly, and without thought of any injury following from them. Occasionally heavy stupor and long continued narcotism would follow, coming on suddenly. Such patients would recover more slowly, and seem more neurasthenic than others. Other cases after taking one or two hundred

grains would become delirious, and cause much trouble, slowly recovering. Some cases would take but little of the bromide, and their restoration would be more positive. Patients themselves will find the bromides of value to check the psychical pain from which they suffer, and take large doses secretly. The experience of many years has taught me to inquire into the history of cases before giving bromides. A case much worn and debilitated, is given small doses of the bromide in large draughts of ginger water. As soon as sedation is apparent this is discontinued. I never give large doses of the bromides for any length of time. Where small doses produce rapid effects I combine it with a tonic, usually cinchonia. Where no effects are apparent, I give warm baths, and very often get the full effect as soon as the bath is over. The remark of Dr. G. M. Beard is confirmed by all experience, viz: "The bromides are powerful remedies, and they may be dangerous as well as powerful, but if we use them wisely, we can obtain and utilize their full power without danger." Certain rules should always govern their administration in inebriety. 1. Never give bromides to stupor, or full bromisation. If stupor follows—use hot baths and general nerve tonics.

2. If the bromides do not act promptly, give small doses at long intervals, and watch for the cumulative effect of all that has been given.

3. Never aim at anything more than limited sedation in these cases with bromide. If it does not follow the administration of three or more drams, try other remedies.

4. Bromides are dangerous remedies in inebriety, not so much from the direct action of the drug, as its influence on the diseased organism.

MALARIA AND DIABETES.

At the meeting of the *Academie de Medecine* on November 29th, M. Verneuil communicated six observations that he had made within the year, relative to surgical affections in persons affected simultaneously with glycosuria and malaria, and he pre-

sented an extended historical review of the authors who had previously noted this association of diseases. He cited in particular the memoir of Dr. Burdel, presented to the *Academie des Sciences* in 1859, of which the following were the conclusions:

1. There exists a true diabetes in malaria.
2. This diabetes is only ephemeral, that is to say, it appears with the fever, lasts during its stay, and disappears with it.
3. The glycosuria of malarial fever reveals the disturbance which destroys the equilibrium between the cerebro-spinal and sympathetic nervous systems.
4. This explanation, given by Claude Bernard, is confirmed by the clinical facts.
5. The more violent the cases, and intense the fever, the greater the quantity of sugar in the urine.
6. When, on the contrary, the attacks become more numerous and less severe, or, in other words, when the malarial cachexia is established, then the amount of sugar excreted becomes less.

In his notes, M. Burdel announced that he found sugar in the urine in considerable quantity in eighty instances among eighty-six cases of malarial fever; in thirty cases where the fever had become remittent, the sugar was in less quantity, and that in pregnant or nursing women, the sugar is present in large amounts.

M. Verneuil reports the notes of six cases, which lead him to formulate the following conclusions:—

1. Malaria frequently causes glycosuria.
2. This may occur in two forms: the one cotemporary with the febrile attack, and, like it, transient; the other occurring after and independent of the febrile attack, and, unlike the first, of which it is a consequence, is permanent.
3. Permanent glycosuria is especially apt to occur in malarial subjects of arthritic diathesis.
4. Malarial glycosuria appears to be one of the benign forms of diabetes.
5. Intermittent affections occurring in such subjects may take on certain characters of malaria or diabetes, or of both affections at the same time. Traumatic lesions may irritate or aggravate

both diatheses, especially that of telluric origin.—*Gaz. Med. de Paris*, Dec. 3, 1881.

The above subject caused an interesting discussion, M. Collin particularly objecting to M. Verneuil's deductions. In the *Journal de Medecine de Paris*, Dec. 17, 1881, the question is subjected to a critical review, of which the following are the conclusions:—

1. The pathogenic influence of malaria can be admitted in a certain number of cases, even though mere coincidence might also be urged; it is probable, however, that this causative influence is not often exerted.
 2. In the cases where diabetes is associated with malaria, it should first be proved that some more efficacious etiological condition is not concurrent with the latter.
 3. Although the present state of sciences will not permit the affirmation of the frequent occurrence of diabetes of malarial origin, the facts observed by Prof. Verneuil are of sufficient importance to cause attention to be directed anew to this interesting subject.
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DIALYZED IRON IN THE TREATMENT OF ARSENICAL POISONING.

Dr. Bullard, in a communication to the *Medical and Surgical Reporter*, gives his experience, as follows: In the smelting of lead and silver ores, one of the worst features is the constant inhalation of arsenical fumes. When first employed by the Alta Montana Company, to take charge of their hospital, a number of cases of arsenical poisoning came under my observation, and they were the more difficult to treat on account of their complication with "leading." I tried the various remedies recommended for such cases, with but poor results. At times I felt that old saying, "Throw physic to the dogs," was but too true and applicable. At last I was led to try dialyzed iron, and was met in all cases with most gratifying success, as is evidenced by the following cases:

Two carpenters were engaged in roofing a portion of the smelting building, and were in such a position that the wind carried the fumes into their faces. Some workmen below noticed one of the men swaying to and fro, and about ready to fall, while the other was laboring hard to reach the ground. They were helped to the hospital, and were suffering with severe pain in stomach and bowels, nausea, vomiting, vertigo, and with a profuse "nose-bleed," tremor in lower limbs, and almost prostration. A wineglassful of dialyzed iron was given immediately. The nausea ceased, and at the end of one hour the men were able to walk to their cabins, carrying with them a bottle of the iron, to be taken in drachm doses every half hour. At the end of twenty-four hours they complained only of weakness, such as would result from a severe diarrhœa. The second day they resumed work, entirely free from all pain and effects of the arsenic. A number of men employed about the smelting furnace, and especially in dipping the molten lead, have been apparently prostrated, from the effects of the fumes, and were in every case relieved by dialyzed iron. A mild purgative was given within twelve hours. I have recommended, and, indeed, insisted on, every man who is exposed to the arsenical fumes, taking a dose of the iron daily. The consequence has been, that we have had but one case of poisoning needing hospital treatment, and this one insisted that his case was one of "indigestion and dyspepsia," and would take nothing till compelled to enter the hospital, where, under the administration of dialyzed iron, he speedily recovered.

In the past two years, I think I am safe in saying that fully two hundred cases of arsenical poisoning have been cured in this camp by dialyzed iron. I could cite any or all of them, with symptoms, treatment etc., but I think it unnecessary, as they so nearly resemble those already mentioned; suffice it to say, that all experienced the nausea, griping, vomiting, muscular tremor, etc. I have given the iron, in half-ounce doses, three times daily, with no constitutional disturbances whatever, even after

ten and often twenty days' administration. The teeth are not discolored, bowels not constipated, and digestion not deranged.

The men have learned its virtues, and come regularly with "please fill my iron bottle again.". They will not do without it, any more than an Irishman will without his "salts and senna." It has saved many a man his wages and many a day of sickness. In fact, I feel convinced that this preparation is indispensable where men are liable to inhale the fumes of arsenic.

Without a remedy of this kind, I am satisfied no man, however strong, could inhale the fumes incident to smelting, where the ores contain arsenic, and stand it more than three or four days. I can fully and confidently recommend this preparation of iron to the profession, and even to foremen of smelting works where there is no physician, for it is harmless and invaluable. "An ounce of prevention is worth a pound of cure;" or a "pound of cure," is worth infinitely more to a company, than are hospitals full of men poisoned with arsenic. Our hospital has been built, medicines bought, physicians and nurses paid, and accommodation for thirty beds provided, inside of two years, by a small monthly assessment on each miner and laborer employed by the company, and all are satisfied; none more so than the smelter hands, who can and do get a "bottle of that iron," and keep at work.

The preparation which I have used, and to the good effects of which I can testify, is Wyeth's, of Philadelphia.

TREATMENT OF ACNE.

The treatment of Acne may be divided into two parts, the one as essential, perhaps, as the other. They are the constitutional and general and the local or special; and in each one of these, the greatest care on the part of the physician and patience on that of the patient are to be observed, as many good remedies may be fairly and conscientiously tried before an impression is made.

Constitutional treatment is to be directed on general principles and as good a therapeusis as possible should be carried out. Where there is a vitiated state of the system it ought to be corrected. Where constipation exists it should be carefully looked after. Saline laxatives should be given with an occasional small dose of calomel or blue mass, and mineral waters should be taken before dinner. Among these are the Ofner Racoczy, Friederichschall, Hunjadi Janos, and many others whose aperient properties are well-known. Duhring recommends the following:

℞	Magnesiae Sulphatis,	-	-	-	℥jss.
	Ferri Sulphatis,	-	-	-	gr xvj.
	Acidi Sulphurici dilut.	-	-	-	℥ij.
	Aquæ destillati,	-	-	-	℥viij.
	M. Ft. Sol.				

Sig. A tablespoonful in a goblet of water two or three times a day.

Should the patient be anæmic or scrofulous, cod-liver oil and good tonic treatment are indicated. Mineral acids especially are good. When iron is given, it should be done sparingly as it is reported by some to excite an eruption of acne; the same may be said of bromide of potassium which is sometimes given as an anaphrodisiac, and iodide of iron as an antiscrofulous which when pushed, often produce the mischief it was extended to repair.

Arsenic was for a time supposed to exert almost a specific influence over acne; but, at present, it is not employed so extensively. It is found of service, at times, in the treatment of the indolent papular form or where the papules are imperfectly developed and is to be given as a tonic in doses of one to three drops of Fowler's solution two or three times a day after meals.

Gubler, of Paris, and Bulkley, of New York, have highly lauded the treatment of acne punctata and comedo by the internal administration of glycerine in tablespoonful doses three times a day. This method has been tried by others, but they deny its good effects, Taylor laying stress upon the fact of his failure to obtain any success.

Another remedy especially directed to this affection is one not long since re-introduced to the profession by Ringer and others. It is sulphide of calcium, which is to be taken in doses of one-tenth to one-half of a grain four times daily. Its chief value is in the suppurative form as it seems to have a tendency to arrest suppuration, making it a valuable remedy in furunculosis. It may do good in acne where there are large postules forming, but it should be carefully watched as W. T. Alexander has lately recorded cases in which the drug produced exactly the effect which it was intended to combat but as the author suggests it may merely be due to personal idiosyncrasy.

Diet and hygiene are two very important factors in the general treatment not only of acne, but of all diseases of the skin whether constitutional or local. Good air, good water, good food, exercise both mental and moral, should not be withheld.

Drs. Satterlee and Piffard, have employed electricity in acne. It would, I think, prove of service in those cases of apparent good health in which the eruption seems referable to some defect in nerve power or in the lessened nerve stimulation. The Faradic current is used, the positive pole being placed at the naps of the neck and the negative pole to the affected parts. This operation is to last some ten or fifteen minutes and is to be repeated every second or third day. There can be no doubt that this method is a good one as it stimulates the nerves of the skin and tends to bring about a normal state in regard to the functions of the sebaceous glands.

The importance of general treatment cannot be insisted upon too much as it plays a large part in the management and cure of that most troublesome and persistent affection—acne vulgaris.

Local Treatment is of the most varied character, being in the main either stimulating or soothing. The mainstay and sheet-anchor in acne is, beyond doubt, sulphur and its preparations. Erasmus Wilson is credited as being the first to propose sulphur lotion as an application in acne punctata and it is yet regarded as of the highest importance. It is the remedy which is, after

all, the safest and most reliable. It is to be used in the form of an ointment or lotion in the proportion of one-half to one drachm to the ounce. The following are the formulæ of three excellent lotions, each one said to be reliable.

℞ Sulphuris loti,	-	-	-	-	℥i.
Ætheris	-	-	-	-	℥vj.
Alcoholis,	-	-	-	-	℥iiijss.

M.

Sig. Apply as a lotion. (Bulkley.)

℞ Sulphuris precip.
Potassii bicarb.
Aquæ laurocerasi.
Alcoholis as ℥j.

M.

Sig. Apply as a lotion. (Hebra.)

℞ Sulphuris precip,	-	-	-	-	℥ij.
Pulv. Camphoræ,	-	-	-	-	gr. x.
Pulv. tragacanth,	-	-	-	-	℥j.
Aquæ calcis,					
Aquæ rosæ,	-	-	-	-	aa ℥ij.

M.

Sig. Use as a lotion. (Kummerfeld.)

Duhring recommends an unguent to be rubbed in at night which is also useful ; it is as follows :

℞ Sulphuris precip,	-	-	-	-	℥i.
Glycerine puriss,	-	-	-	-	℥ss.
Adipis benz,	-	-	-	-	℥j.
Ol. rosæ.	-	-	-	-	gtt. iij.

M.

James Gage Persons, recommends the use of precipitated sulphur in its dry state. It is to be applied to the face with an ordinary powder puff as face powder is, and, by the addition of a few drops of some essential oil, it makes a good cosmetic. He

claims that this is the most rapid in its action. I have employed this method and am well pleased with it, both on account of its efficacy and the favor it finds with patients.

In many indolent cases a stimulating course of treatment will be necessary and washing with *sapo viridis* with thorough friction of the skin will be found of benefit. The following is also a good stimulant application : take of *sapo viridis*, alcohol and rose-water, each one part. If not sufficiently strong take of the soap two parts and of alcohol one.

In *acne punctata*, Hillairet recommends touching the points of the papules with tincture of iodine or of cantharides and as a milder stimulant washing with a solution containing water, 250 parts; borax, 10 to 15; and sulphuric ether 8 to 15. When the skin again becomes normal in its action modify the secretions by means of astringent lotions.

Sulphuret of potassium is a good local application in a strength of five to twenty-five grains to the ounce. It is particularly serviceable in the papular form. Prof. Hardy, of Paris, combines it as follows :

R̄	Potassii Sulphuret,				
	Tinct. benzoin,	-	-	-	aa gr. viij.
	Aquæ rosæ,	-	-	-	℥j.

M.

Sig. Apply night and morning.

Where very active stimulation is required the biniodide of mercury has also been highly spoken of in the strength of five to ten grains to the ounce. Corrosive sublimate is a great favorite with some but it is uncertain in its action. It is given in the strength of one-eighth to one grain to the ounce and its best vehicle is an emulsion of almonds.

Neumann recommends mercurial plaster applied on cloths, during the night, for severe cases of indurated acne.

Hutchinson, Morris, Liveing, and other English authors greatly recommend a method which consists in taking a glass

rod, dipping it in a solution of acid nitrate of mercury and lightly touching the summits of the pustules, care being taken to use blotting paper to absorb the excess of remedy. No matter how carefully done, it may result in leaving scars much worse looking than the pustules, and, on that account, it is not in very great favor.

Besides, we have other local means which are more purely mechanical, or rather surgical in character. The glands should have their contents squeezed out in order to relieve their walls from pressure and the best method of doing this is by means of a comedone extractor.

In sluggish papules accompanied by comedones the dermal curette is of great value, as it brings on a healthy inflammation of the tissues to replace the chronic infiltration. In acute acne indurata scarifications should be made freely and hot water applied to promote the bleeding and relieve the engorgement. This establishes a tendency to resolution.

When the pustules are large, or when there is a suspicion of pus in a papule, the proper treatment is to cut them open so as to give free exit to the contained pus. If there be a superficial distension of the blood-vessels, it is not only proper but imperative to cut open the papules so as to relieve the vessels. The proper dressings are then to be applied. Where the papules remain miliary they should be opened with a milium needle.

You will find, no doubt, that I have omitted many remedies and methods, but the local measures, in this affection, are so numerous and varied that it would be well-nigh impossible for me to enumerate all of them. I have endeavored to give the principal ones.

The following are some of the substances used in the local treatment of acne: Carbolic acid, aconite, chloride of antimony, lemon juice, collodion, chloride of iron, peroxide of iron, cyanide of mercury, potassa, chlorate of potash, borax, talc, iodide of potassium, ammoniated mercury, albuminate of mercury, oil of cade, vaseline, chrysophanic and a host of others.

The treatment depends upon the observation of the physician, who must determine whether stimulating or soothing treatment is to be employed, and in either case he will only have *l'embarras de richesse*. The surgical methods to be used should never be forgotten, as they are by far the most satisfactory in their results.

PRACTICAL NOTES ON NEURALGIA AND ITS TREATMENT.

There exists no better established nor important fact than that neuralgia is a disease arising when the body is in a state of general debility. This is now more generally recognized than formerly, when pain was too often regarded as the symptom of what was termed "sthenic inflammation," to be energetically treated by low diet and depleting remedies.

As this disease is frequently mistaken for rheumatism, gout, spinal irritation, etc., and *vice versa*, it may be well to name some of the leading features of a typical case of neuralgia. 1. It occurs when general debility exists, is increased by fatigue, mental or bodily, but relieved by food and sometimes by stimulants. 2. The pain, which is sudden, darting, and excruciating, exhibits remarkable intermissions, especially in the early stages of the complaint, and the constitutional disturbance is slight, (temperature, pulse, etc., frequently normal). 3. It is usually unilateral. 4. As the disease advances tender spots (points douloureux) are formed in the course of the affected nerves.

That debility is a prime factor in neuralgia we have but to call to our remembrance cases which constantly appear. The overworked, anæmic, badly fed girl suffering from neuralgia of the fifth, the anxious struggling man in the early years of professional life or business, the married woman weakened by childbearing or over-zealous in domestic cares, and the neuralgia of declining years, degeneration having set in, nutrition being defective. In our diagnosis we are assisted by the family history of the case, whether nervous disease in any of its varied forms has existed.

The treatment should be directed in every case towards improving the general health. Nutrition must be improved by very nourishing food, well masticated, and if stimulants are prescribed they should be given with food; pure air night and day; great cleanliness, and the use of sponging with sea-salt and water. Cod-liver oil and cream are of service, given after meals. Quinine in facial neuralgias, and also chloride of ammonium; arsenic in cases of angina pectoris; iron and strychnine in anæmic states. Bromide of potassium is useful in mild cases, where the pain is not severe, but a general nervous condition exists, with restless irritability. The subcutaneous injection of morphia, beginning with one-sixth of a grain, is the most speedy and useful remedy we possess, and is a curative agent; for it checks at once pain, and thus gives us the opportunity of carrying out all those constitutional measures for improving the general health, whilst it disturbs but little appetite and digestion, and with use a toleration is established, and appetite sometimes improved; for nothing is more apt to destroy appetite than the distress of severe pain. In chronic cases of neuralgia, a blister, not necessarily carried to the point of vesication, is often of the greatest possible service, and it is a treatment peculiarly adapted to old-standing intractable cases.

Having sketched the mode of treatment it is unnecessary to give illustrations of the ordinary cases which constantly present themselves in hospital and private practice. I therefore select from my note-book one of several successful cases where neuralgia has occurred in that period of life when a cure is rarely accomplished (some authorities say *never*)—the degenerative period.

In March, 1877, I saw, in consultation with Dr. Walker, of Wakefield, a lady aged seventy-six, who in early life had suffered severely from neuralgia of the stomach, which had been much aggravated by the treatment then in vogue of insufficient nutritive food and depleting remedies. This patient was seized with violent pain, affecting the nerves of the scalp, and which be-

came so excruciating as to deprive her of sleep for many successive nights. She became delirious in consequence, and we decided to inject one-quarter of a grain of morphia. This gave prompt relief and procured sleep. She was ordered turtle-soup, oysters, and an exceedingly nutritious dietary. She was well supplied with food at night also, which invariably relieved the pain. A mixture, containing half-drachm doses of aromatic spirit of ammonia and fifteen minims of tincture of nux vomica, seemed greatly to improve the appetite, which became prodigious and surprising. The tendency to degenerate was kept prominently in view, pure air was freely supplied in the bedroom, and every other measure taken to improve nutrition and the general health. As a local application, the chloroform liniment with tincture of opium relieved pain, and as soon as the case became chronic, the hair was cut closely and blistering fluid applied to the tender spots, which well developed in this case; multiple abscesses formed, and were frequently opened by Dr. Walker. This old lady, after an illness of three months' severe suffering, recovered perfectly, left Wakefield for Harrogate, and is now (1882) in fair health, having had no return whatever of her former complaint. Her body is feeble, but her mind extraordinarily clear and bright for a lady who has passed her eighty-first year.—*London Lancet*.

COATED PILLS.

Of all the different methods of making pills tasteless by means of coating, the sugar and gelatine coating has been found to be the best. It has been said that pills must be dried out to allow a coating of sugar, and that is partly so, but drying out is necessary to keep the pills from spoiling and moulding. Suppose pills are coated while soft they *must be dried out after coating* or else they will spoil and cannot be kept in stock. The case stands so: If the coating of gelatine has to be done by means of needles, pills cannot be coated if they are hard, and therefore *must be coated while*

soft, but must be dried out after coating, while pills to be coated with sugar can be dried out *before* coating and thus do not need drying out afterwards. If the pills would be kept in stock without having been dried out they would become mouldy and would spoil. We can have pills which remain soft and do not become mouldy, but such pills have been made by adding grease to the pill-mass. If the proper excipient has been used, hard dried-out pills may dissolve quicker than soft ones. To prepare a pill-mass properly for making pills in large quantities, without resorting to means which should not be used, a long experience is required. Of such pills to be found in trade, which have been properly prepared according to theory and practical experience, we should mention the pills prepared by W. R. Warner & Co., of Philadelphia. These pills are soluble, can be kept in stock without spoiling and are always of the same nice appearance and uniformity.—*Apotheker Zeitung*, New York, March 15, 1882.

SULPHIDE OF CALCIUM AS AN ANTISUPPURATIVE.

Dr. Andrew H. Smith, Chairman of the Committee on Restoratives of the Therapeutical Society of New York, furnishes to the "*New York Medical Journal and Obstetrical Review*" for June, 1882, a report of the committee on the use of sulphide of calcium for the purpose of preventing or diminishing suppuration. After giving the experience of several members of the society, Dr. Smith concludes his report as follows: Judging from this limited number of cases, it would seem that we are warranted in concluding that in many cases of suppurative affections, ranging from the small postules of acne to extensive suppurating surfaces, an appreciable, and often a very marked, benefit is derived from the use of the calcium sulphide, suppuration which would otherwise take place being averted, or the quantity and duration of an existing discharge being lessened. At the same time its action is not uniform; and in many appar-

ently favorable cases it will fail entirely. The drug is somewhat prone to irritate the stomach, and this circumstance affords an indication for small doses frequently repeated instead of larger ones at longer intervals. One-tenth of a grain every two hours in acute cases will generally secure the full therapeutical action of the drug, but larger doses may sometimes be required, and some patients will bear well a grain three or four times a day. Even in small doses the sulphide will occasionally produce headache, and the patient is usually more or less annoyed by eructation of sulphuretted hydrogen.

BILLROTH ON REMOVAL OF CANCER.

In the course of a letter from Billroth to Dr. Wywodzew, concerning the nature of the last illness of Pirogoff (a translation of which appeared in the *Boston Medical and Surgical Journal*), this great surgeon, discussing the propriety of operative interference for the relief of cancer of the jaw, from which Pirogoff was suffering, says: "Interesting and instructive as the results of the microscopic examination are in such cases, and the etiology of the development anatomically so well illustrated, the diagnosis of cancer in this case would not have influenced me to an operation. A man over seventy, of active mental habits, yet showing all the signs of bodily marasmus, with a cataract in each eye, etc., has no possible chance of withstanding an operation such as I would have been compelled to make, even in order to prevent a recurrence for a very short period of time. My experience, of thirty years, as a surgeon, has taught me that those sarcomata and carcinomata which originate away back on the upper jaw can never be radically removed by operative interference, when one operates so as to provide for the probability of the patient surviving the operation. One is so disturbed in this region, partly by technicalities, part anatomically, that a true and total extirpation cannot be made, save in those isolated cases where one has to do with an encapsulated tumor. I am no longer the bold, unterrified operator I used to be."

Correspondence.

EDITORS JOURNAL:

STRASSBURG, July 1, 1882.

Since my last letter from Vienna, I have been studying in Strassburg, attracted here chiefly by the fame of Von Recklinghausen. It is fast becoming one of the best of German universities. In the eighteenth century it was German, and Goethe was one of its graduates in the law department, but since that time, until ten years ago, it was a French Academy with but few students. After the recent cession of Alsace to Germany, the Berlin Government has paid attention to making the city as much an university town as an impregnable fortress. In addition to many new buildings already complete, are still five or six magnificent structures in process of erection. The medical faculty is a brilliant one. The anatomist and histologist, Waldeyer with the pathologist, Von Recklinghausen, have one building together, with probably the finest laboratories in Europe. In the same building are the anatomical and pathological museums, the former rich in marvelous work, from the skilled hands of Waldeyer and Jössel. For these two branches of medical science, Strassburg is now pre-eminent. No other university has such teachers, such material or such conveniences. Both professors are arduous laborers; from early morning until seven every evening at their posts, and take the greatest pains with their pupils. Von Recklinghausen makes some five or six post mortem examinations daily, which together with material sent him by physicians in the city, furnish sufficient for six hours weekly demonstration. He is considered here as second to Virchow, and it is said he will be called upon to succeed his former teacher in Berlin, upon the decease of the latter, who is already at an advanced age; but it is also said he will not leave Strassburg. The fine laboratory of Hoppe-Seyler, professor of physiological chemistry, is another building in the same neighborhood. Indeed nearly all of the medical department buildings are near together. The name of Kussmaul is so well-known, I need but

mention that he is professor here of internal medicines, and to be heard in the Bürgerspital every morning for two hours. The Bürgerspital is a small village in itself. In it are the clinics for internal medicine, diseases of children, eye and ear, psychiatry and the poliklinik. The only one of the old French professors who cared to remain in connection with the university after the late war is Aubenas who still holds forth on *maladies puerperales*.

Koeberle, a star of the French period, famed for his ovariectomies, though still a resident of Strassburg, is no longer a teacher. He has a hospital of his own to which no students are admitted. Through the influence of a Buffalo physician, Dr. Tobie, I have had the pleasure of being invited to operations by Koeberle during my stay in Strassburg. His method of ovariectomy differs from any I have seen before in several ways; in the speed with which he opens the abdomen, in the slowness with which he proceeds afterward, in the care he takes to check the smallest oozing of blood, and in the closing of the abdominal wound. The ligature of the pedicle is of strong Chinese silk. Silk stitches are put through the subperitoneal fibrous coat, leaving the peritoneum wholly intact, and the skin and subcutaneous tissues brought together with an ordinary continued silver pin suture. In this way a very close and even adjustment of the sides of the incision is made, and drainage of the pus around the stitches outward, and outside of the peritoneum secured. His only antiseptic precautions are the placing of the instruments in a mild solution of carbolic acid, and the laying of a little sharpie moistened with the same over the wound. Around the abdomen a simple bandage is pinned. The legs are bound together and a bolster placed under the knees to prevent tension upon the wound. The anæsthetic used is chloroform. The operation is performed in the bed in which the patient is to lie. Freund is professor of midwifery and diseases of women. He also is famed for his ovariectomies, but more especially for his operations for removal of the uterus. He has at present a hospital of his own, but the new woman's hospital is rapidly under-

going construction, near the other medical buildings. Freund is a man of very lucid and pleasing address. Some of the other professors are Goltz on physiology, Schmiedeberg on therapeutics, Jolly on psychiatry, and Laqueur on the eye.

The University library is very important, consisting of 500,000 volumes, with a well selected medical portion, and in the reading room are to be found medical journals in all languages, America being represented by some of her best. Just here I would like to speak of my mortification at finding that the only American medical journals at the reading room of the hospital at Vienna were the *Boston Medical Record** and that contemptible advertiser of Parke, Davis & Co., known as the *New Remedies*,* nearly every article in which glories in the name of that firm. The excellence of the *Boston Medical Record* can scarcely annul the disgrace of having that Detroit journal considered by the Viennese, as to some extent representative of legitimate American medical journalism. Could not the editors of our best journals contribute a copy and send to the *Leseszimmer*, *Allgemeines, Krankenhaus*, Vienna?

The recent experiments of Koch in Berlin, resulting in the discovery of the bacteria of tubercle, were carefully repeated by one of the Russian students in the laboratory of Von Recklinghausen, and the slender, blue bacilli shown to the professors and his friends. If within the next few years, it be corroborated that the bacilli are really the cause of tubercle, then it remains but for therapy to discover their destroyer, and the scourge of the world will be annihilated. It looks as if physicians were not to work in the dark much longer.

Living expenses in Strassburg are little lower than in Vienna, and there is a marked difference in the fees for lectures. None of the lecture courses cost over \$8 per semester, five months. One can learn most in Vienna in shortest time, but for long stays, undoubtedly Strassburg is much superior.

* Our correspondent has certainly made a mistake here in names. We never heard of the *Boston Medical Record*. *New Remedies* is published in New York; in its special field it is an excellent Journal and one which an American need not be ashamed of.—EDITORS.

The number students for this semester in the university was 700. It would have been greater, had not a severe epidemic of small-pox during the whole spring until now, frightened many away.

I must now bring this letter, at the same time with my stay in Strassburg, to a close. Perhaps toward autumn I will have something to say of the University of Stockholm, where I go now to study with Axel Key, one of the best of living pathologists, and to whom I carry a message and greetings from Von Recklinghausen, for the two were students together under Virchow.

FREDERICK PETERSON.

"SEWER GAS AND ITS DANGERS."—LETTER FROM PROF.
F. H. HAMILTON.

NEW YORK, 43 W. 32d Street, July 26th, 1882.

EDITORS BUFFALO MEDICAL AND SURGICAL JOURNAL:

I desire to correct a statement made by Dr. Davidson in his paper on "Sewer Gas, and its Dangers," contained in the July number of your Journal.

Referring to my paper read before the New York Academy of Medicine, March 16, 1882, entitled the "Struggle for Life against Civilization and Æstheticism," Dr. Davidson says: "Dr. Hamilton declares that 'the foul gases readily pass through water, and there is no security against sewer gas but the proper use of chemicals, supplied to the traps daily;'" and then Dr. Davidson adds, "perhaps recognizing the impossibility of carrying out such a recommendation, he farther advises as the only real security, the placing of all the plumbing fixtures in an annex to the building. Dr. Hamilton's views were endorsed by Dr. Doremus."

The fact is that, so far as the use of chemicals was concerned, the remark attributed to me is substantially what was said by Prof. Doremus, and of which I expressed neither approval nor disapproval; nor did Prof. Doremus say one word by the way of approval or disapproval of what I said about placing the fixtures in an annex.

Probably Dr. Davidson was misled by some newspaper report, but if he will look at the report of my lecture as published in the *Medical Gazette*, where alone it was published entire, he will see how great has been his misunderstanding of the facts, and that there was no occasion for the intimation of either mental or moral weakness on my part, conveyed in the last clause of the above quoted paragraph; and that I did not in a written lecture, read before intelligent men, advise the public to do what I knew was "impossible," and then seek to escape from the dilemma in which I had deliberately placed myself, by advising the public to do some other thing which it was possible to do.

Yours truly,

FRANK H. HAMILTON.

In an editorial in the *Sanitary Engineer* on "The Discussion of the Academy of Medicine on Plumbing," the following sentences appear:

"He (Dr. Hamilton) said, it was well known that water was no protection against these foul gases, for they readily passed through it. There was no remedy, he said, against sewer gas, except the proper use of chemicals supplied to the traps daily. He believed that, to secure the best protection, all plumbing fixtures should be placed in an annex to the dwelling."

Prof. Doremus is reported as saying, "He *also* believed that the only means of protection was by the use of chemicals in the trap."

When Prof. Hamilton's article appeared, I read it with much interest, but unfortunately failed to make a note of the journal in which it was, and it proved impossible to find when again wanted. The impression left upon my mind was, that Dr. Hamilton's views were fairly represented as above. On receipt of his letter I referred to the files of the *Medical Gazette* and find that the sentences objected to appear in Dr. Hamilton's article substantially as quoted, *but only* as the expressed opinion of Drs. Doremus and Parker, and without any expression "of approval or disapproval" on the part of Dr. Hamilton. My apologies are therefore due and are gladly made to Dr. Hamilton for the unintentional misrepresentation.

A. R. DAVIDSON.

Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Special Meeting July 1st, 1882.

President, Dr. A. R. Davidson, in the chair. Dr. C. M. Daniels, Secretary.

Minutes of last meeting read and approved.

Present—Drs. Rochester, Mynter, C. L. Dayton, Runner, Hopkins, Bartow, Barrett, Burghardt, Daggett, C. A. Ring, Hartwig, Bartlett, Howe, Warren, Moody, Fowler, Van Peyma, and by invitation, Drs. McBeth, Waldurff, Berkes, Mann, Coakley, Ingraham, Fell, and Frederick, also, Mr. A. Briggs and Mr. D. C. Beard.

Application for membership received from Dr. Coakley, who was duly elected.

Essay—By Dr. A. R. Davidson, subject: "Sewer Gas, and its Dangers." A full report of this paper is given in the July number of the BUFFALO MEDICAL JOURNAL.

Discussion—Dr. Rochester expressed his thanks to the essayist for his excellent paper, in which he had made clear many points connected with house drainage, which were not generally understood, especially that of the syphonages of traps. He had himself given the subject a good deal of attention, but Dr. Davidson, by means of the ingenious apparatus with which he had demonstrated the practical working of an unventilated system of house drainage, had shown beyond question the uselessness of the ordinary trap without a ventilating attachment. The plan, which the lecturer proposed to prevent the entrance of sewer air into our houses, seemed to be a simple and practical one, and would, no doubt, avert the danger arising from this source. Since the last meeting of the Association, he had changed his views regarding the non-infecting qualities of "sewer gas"; now believing that it was often the cause of

disease. He related to a case, where sewer had burst beneath a house, where it was covered with earth to a depth of four feet—there being no cellar—and where the “sewer air,” (as he preferred to call it) penetrated upward into the house. He thought that the infecting property were similar to that of water infected with the germs of typhoid fever.

Dr. Coakley had listened to the paper with much interest, but thought that the plan, as portrayed upon the blackboard, was open to the objection, that the soil pipe was too frequently tapped by the pipes from other fixtures. He referred to his own experiences in building, and in his opinion all pipes should go to the basement, there uniting in a hopper, which should be connected to sewer by only one opening. The hopper first receiving all sewage from the house, and this hopper protected by a bell-shaped hood and connected by a pipe to a flue in a chimney.

Dr. Bartlett thought the subject of great importance, but would lay greater stress upon the necessity of ventilation outside of buildings, and hoped it would not be long before the sewers were ventilated by man-holes, etc.

Dr. Hopkins thanked the essayist for the able manner in which he treated the subject, and spoke of the sensational manner in which the dangers, arising from sewer air, were discussed and often magnified. He denied that it was possible to have spontaneous development of disease germs from the sewer air itself. He referred to the too often found illy-ventilated beds and bed-rooms.

Dr. Fell related a case, where a servant died of typhoid fever that seemed to have been caused by an abandoned and leaking sewer, running under the house.

Dr. C. L. Dayton appreciated the able manner in which the essayist explained the best way to get rid of sewer gas, and thought the public should be educated up to it. He hoped that the proceedings of this meeting would be published and the public thereby enlightened.

Dr. Davidson differed with Dr. Rochester regarding the possibility of the sewer gas itself having infecting properties, and objected to the plan of connecting ventilating pipes with the chimney flue.

Voluntary Communication—Dr. Mynter related a case of a man, 56 years of age, temperate, etc.; had soreness of heel, caused by being slightly punctured by a nail and which caused only a local inflammation. This, however, increased; foot became œdematous, and four free incisions were made. There was no bleeding; tension being so great that arterial circulation was cut off. Amputation was advised. The patient asked delay for two weeks, when hemorrhage occurred; amputated at middle of leg; arteries found atheromatous and filled with calcareous matter. Patient died on fifth day afterward. The case was of interest, as being one where the condition was not caused by alcoholism. He attributed it to the same causes as produced senile gangrene.

Dr. Rochester related similar cases and thought that age did not decide it, but that the cause was due to embolism, also, that they resembled phlegmonous erysipelas.

Dr. Hartwig related a case of spontaneous expulsion of fœtus, at fourth months, with membranes intact, and asked if any physician present had similar experience.

Dr. Bartlett said he had seen several from third to fifth month, and recounted one where a case had gone on to seventh month, when expulsion of fœtus, membranes and placenta took place. The fœtus had evidently been dead about three months, as cord was firmly around the neck and strangulation was complete; the size of the neck being compared to a thread.

On motion the reports as to prevailing diseases and other business was laid over to the next meeting.

The President appointed as a Finance Committee for the current year Drs. Hopkins, Mynter and Daniels.

The Association then adjourned to the first Monday in August.

CLAYTON M. DANIELS, *Secretary*.

Editorial.

VOLUME XXII.

With the present number the JOURNAL enters upon its twenty-second volume. We leave our patrons and readers who have contributed to, or scanned its pages, and thus become directly interested in our labors, to render judgment upon the merits of the past. It may be becoming the editors to speak of the future; and while sharing with the profession whatever praise or censure may be given the JOURNAL in the efforts to advance the interests of medicine, we may affirm that, as the medical press is but the reflex of the medical thought of its constituency, the future of the JOURNAL will depend not only upon the energy and zeal of its editorial corps, but upon the profession for which it aims to be an exponent, and whose interests it strives to advance. It is a truism that a profession which is alive to the great responsibilities devolving upon it, and earnest in its endeavors to advance the science of which it is the custodian, will seek expression for its zeal through the medium of the press. If a publication, such as this, fails to command support and to obtain a high standing, the failure then must be shared by the profession. The future of the JOURNAL in so far as it adds to the stock of human knowledge, and to the advancement of medical science, will be largely influenced by the interested efforts of its readers and patrons.

With a view to secure such co-operation, special inducements are offered for contributions on subjects of scientific and professional interest. Under the head of Original Communications, articles from our best writers will be published, and we have assurances that this volume will surpass any of the preceding volumes in the completeness and value of its pages.

Special attention is directed to Clinical Reports, under which head the record of rare and interesting cases of post-mortem examinations, comparative results of medicinal agents, and also data gathered by the busy practitioner who finds but limited leisure for recording his professional experience, will be published.

The Translations and the Selections from our exchanges will be made solely with a view to their practical value and benefit to the profession.

Upon subjects of general professional interest, the position of the JOURNAL will be independent and its criticism will be without fear or favor. We are earnest advocates of a higher standard for medical education, believing that the Degree of Doctor of Medicine, in many of our medical colleges, is bestowed too often from considerations other than the professional attainments of the applicant.

With a larger circulation than ever before in its history, the JOURNAL finds in a wide and appreciative constituency, a field for labor and effort, which will repay for the most assiduous care, upon the part of its editors, in the preparation of its monthly issues.

We ask the active, earnest co-operation of the profession to maintain a higher standard of merit for the JOURNAL, and with such liberal assistance from our readers, the present volume will surpass any of its predecessors in professional and scientific value.

THE BUFFALO MEDICAL COLLEGE.

Session of 1882-83.

Among our advertisements will be found the announcement of the Buffalo Medical College for the coming session. Especially, and we may also say painfully, noticeable is the omission of the name of the late Prof. White, which has stood at the head

of its faculty for so many years. The strength of his character and the sagacity of his counsel and leadership, guided by an intense interest and ambition for the reputation and success of the college, are a serious loss to this institution, which will more or less influence its future career.

New names, heretofore but little known to its alumni, fill the vacancies and supply the changes thus made. Dr. Mann, a gentleman of wide culture and scholarly attainments, fills the chair of Obstetrics and Gynecology.

The resignation of Prof. Doremus will be a surprise and regret to all who witnessed the energy, zeal and ability he brought to his work. Dr. Witthaus, of New York, has been elected to fill this vacancy and will take up his residence in Buffalo.

The chair of *Materia Medica* and Hygiene is again filled by the former incumbent, Dr. Stoddard, who has been induced to withdraw his final resignation offered over a year, and to again undertake the self-sacrificing duties of professorial work.

Several new lecturers are appointed, among whom we notice with pleasure our late editorial associate, Dr. Howe, who will give the class the benefit of his ripe experience and acknowledged ability in the department of Ophthalmology.

A most excellent selection is that of Dr. M. B. Folwell, who assumes the lectureship of Dermatology and Syphilis. Dr. Folwell has already established an enviable reputation in this specialty, and is a valuable acquisition to the corps of instructors.

Dr. Richard M. Moore, of Rochester, fills the position of lecturer on Histology.

These changes betoken a liberal policy on the part of the college faculty. The term of lectures has also been lengthened. We look for another step in advance at an early day—the establishment of a graded curriculum of study and a higher standard of acquirements for the degree of Doctor of Medicine.

EDITORIAL CHANGES.

Our subscribers will notice that this number of the JOURNAL appears without the names of two of its most able collaborators among its editorial corps, Drs. Howe and Mynter having retired from the management. The JOURNAL will continue under the direction of its present editors. We have assurances that our late associates will favor our readers with frequent contributions from their pen, and their efforts will not be lessened by this separation in advancing the interests of the profession through the medical press. We join in the general expression of regret that circumstances should influence a dissolution of the very pleasant and cordial relations which have existed in the JOURNAL Association since its organization three years ago; and in parting with our late colleagues, we but express the sentiment of the profession that their labors have largely contributed to the favorable reception given to the JOURNAL under the late management.

This change places increased responsibility and labor upon those who remain; and in our efforts to give the profession a publication worthy of its patronage, we are assured of a large measure of sympathy, through the experience of the past, from our retiring associates.

EDITORIAL NOTES.

THE Chautauqua Co. Medical Society, at its annual meeting, passed resolutions of protest against the action of the State Society on ethics, and instructed their delegates to vote to have it rescinded.

THE *Scientific American* of July 29th contains an interesting article on the manufacture of opium, with illustrations of the various processes which the drug undergoes before ready for the market.

The Medical Chronicle is the latest addition to the ever changing list of medical journals. The record of births and deaths is about equal. Dr. George H. Rohe brings this last one into the world as a 24-page monthly, published in Baltimore. Success to it.

THE strictures of the *London Lancet* on the unsanitary condition of Brighton (England's great health resort) have been met by the town authorities with a suit for libel. The statement is made that a fund of \$30,000 is guaranteed to defend the reputation of the place as a health resort.

THE circulation of the JOURNAL has been largely increased of late, evidence that our editorial efforts are appreciated. We not only ask for new subscribers but prompt payment of subscriptions upon the part of the old ones. Bills will be presented, for which we request prompt and favorable attention.

THE working bulletins issued by Parke, Davis & Co., giving practical observations on the action of their medicinal agents, is a movement in the right direction and should receive encouragement from the profession. It gives the specific action of remedies from a variety of sources and from the experience of different observers.

OUR congratulations are due our much-esteemed friend, Dr. Ed. Storck, of this city, for his recovery from the dangerous illness with which he has been afflicted for several months. We hope renewed health and strength will be given him for future work in the profession in which he has labored so earnestly and successfully in the past.

DYSPEPSYN.—Some months ago we acknowledged the receipt of a quantity of this preparation, which the manufacturers wished us to make a trial of. Our experience with it so far has abundantly sustained the high claims made for it. It is one of the best remedies in the cases which require artificial aid to facilitate digestion. It is superior to the ordinary pepsins and is much less expensive to the patient.

WE have received a notification from the Secretary of the National Board of Health, stating that insufficient provision having been made in the "Sundry Civil Appropriation Bill" for the present year for the expenses of the Board, the publication of the *Bulletin* would be at once suspended, should the bill, as reported, pass the House. We hope it is not too late to obtain the necessary legislation to ensure the continuance of this valuable publication. Its discontinuance would be a public loss.

Reviews.

Trance and Muscle Reading. By GEORGE M. BEARD, A. M., M. D. New York.

The forty pages of this pamphlet relate to a subject which might well occupy many times the same space, and yet the principal points are well presented and considered in all fairness. The essay furnishes entertaining reading for any one interested in such studies.

The Physician Himself, and What He should Add to the Strictly Scientific.

By D. W. CATHELL, M. D. Baltimore: Cushings & Bailey. Price, \$1.25.

A series of excellent homilies, this is, which remind the practitioner of his shortcomings, and show him what he should be as a man and a citizen. The gentlemanly, upright physician is apt to see the straightforward path without any such directions, and one possessed of moral obliquity, would not be apt to follow it, even if it were pointed out. None the less is it well to have this done, and the writer has here succeeded in making prominent many a point in regard to tact and business management, which is of enormous importance in directing the course of what the world calls a "successful physician."

The Incidental Effects of Drugs. By DR. L. LEWIN. Translated by W. T.

ALEXANDER, M. D. New York: William Wood & Co.

It is well that we are taught occasionally as to how much, or rather how little, can be expected from drugs already known. This is, perhaps, better than additions to our list, already too long. At any rate, the writer has here clearly presented the principles upon which many familiar drugs act, and in addition gives numerous suggestions which can be made use of clinically. An excellent book it is for practitioner as well as student.

Marriage and Parentage. By a "Physician and Sanitarian." New York : M. L. Holbrook & Co.

The drift of this series of articles is to show that men and women ought to have their senses about them, when thinking seriously of matrimony. A sound proposition, this, and one in which most persons—especially those already married—will, doubtless, concur. But when the writer goes so far as to advocate that young people should "consult a wise sanitarian before entering into the marriage relation," he oversteps the limit of public opinion, to say the least. This would, undoubtedly, be very advantageous to professional sanitarians, as they could then abjure sewer gas and similar nauseating subjects, and turn their attention to the more attractive arts of match-making.—Probably this suggestion of the writer will not be carried out just at present, but many others are made which are sensible and practical. In general it is an excellent little book for physicians or others contemplating marriage. To such we earnestly recommend it.

Diseases of the Ear in Children. By ANTON VON TROELTSCH, M. D. Translated by J. Orne Green, A. M., M. D. New York : William Wood & Co.

This originally formed the contribution of von Troeltsch to Gerhardt's Manual of Children's Diseases, and as now presented in a separate volume, must prove acceptable to many who do not care to purchase that entire work. It comes from the pen of one of the highest authorities in otology in Germany, and is translated by another who occupies the same position in this country. This of itself, is sufficient recommendation. Of course, the book contains much that relates to diseases of the ear in adults, but it is written from a standpoint which enables the practitioner to judge more from signs than from symptoms, and in this it is especially of value. No one can read it without admiring the erudition of the author and profiting by his practical suggestions.

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Original Communications.

THE MANAGEMENT OF AN ABORTION.

BY MATTHEW D. MANN, A. M., M. D.,

Professor of Obstetrics and Gynecology in University of Buffalo.

Scarcely any accident to which the pregnant woman is liable, is so likely to leave unpleasant consequences in its train, as an abortion. Occurring in the earlier months of gestation, when the union between the ovum and the uterus is very close, and before the uterine expulsive powers are well developed, unless art intervene, it is very apt to produce effects, which, although they may not be immediately fatal, are far reaching for evil.

The reason for this is that an abortion is an *abnormality* from the beginning. It is a product of civilization. Women in a state of health and nature never abort, save from violence; so that when the accident happens in our over-civilized poorly developed females, nature is taxed beyond her resources, and unless helped by art, is often entirely unable to complete the process which has been begun. In other words, nature never meant such a thing to happen and is consequently but imperfectly prepared to deal with it.

We are very often forced, therefore, as obstetricians, to take a prominent and active part in the management of the affair, and the danger is not of doing "meddlesome midwifery," but rather of trusting to nature a task for which she is often entirely incompetent.

The management of an abortion varies with the age of the ovum. In the first and second months very little is to be done. There is no placenta formed at that early period, and when the ovum comes away it generally does so entire, leaving nothing more than some few shreds of membrane which are not likely to do any harm. If we put our patient in bed until it is all over, and keep her there for a few days, we have done about all that is required in the way of treatment.

If the hemorrhage should happen to be excessive before the ovum comes away, a tampon may be applied, and on its removal the ovum will generally be found in the vagina. If there be a flow of any amount afterwards, it may be treated by a few applications of strong tincture of iodine to the inside of the uterus, or, if necessary, by removing with the curette any shreds of membrane which may remain.

The time when abortions are most apt to occur, is at the third menstrual epoch, after the last flow. At this time the placenta is beginning to be quite well formed, but the proportionate amount of maternal tissue involved in its structure, is much greater than when it is fully developed. This close union between the maternal tissues and the ovum is what causes the trouble and danger at this time. After the fifth month this danger no longer exists. Then the placenta is easily separated from the uterus and ordinarily gives no trouble.

Of abortions which occur in the third and fourth months, there are two classes which differ very much from one another in their results and in their demands for treatment. The first class includes the cases where the ovum is entire, and the second class comprises the cases where the sac ruptures and the fœtus escapes with the amniotic fluid.

1st—When the sac is entire. This is the rule in the first two months and may occur at any period of utero-gestation, particularly in those cases where the fœtus has been long dead. But, at the time we are speaking of—in the third and fourth month—it is the exception. If the patient be seen in the earlier stages, before the separation of the ovum from the membranes has advanced very far, then all our energies must be directed towards stopping the process and thus preventing the abortion. To this end the patient should be kept absolutely quiet in bed, opium given to accomplish this, if necessary, and full doses of the fluid extract of viburnum prunifolium administered every hour or two. Although my experience with this last drug has not been very extensive, I have considerable faith in it and can safely recommend it for further trial. It never produces any unpleasant symptoms as far as I know.

If these means do not have the desired effect, then we have little to do but to wait until the ovum is expelled. The tampon is scarcely ever necessary, as the unruptured ovum acts itself as a tampon, being forced into the cervical canal and held tightly there, owing to the undeveloped and undilated condition of the tissues surrounding it.

If the progress of the case is slow and the practitioner should be forced to leave the woman for a considerable length of time, as frequently occurs in the country, then the placing of a tampon as a precautionary measure is good practice; for such a case, although everything seems to be doing well, may be changed into a case of the second class at any moment by the bursting of the sac, and in such an event the presence of the tampon might save the woman's life.

It is needless to say that any measures, such as a violent examination or the passage of an instrument, which might jeopardize the integrity of the fœtal sac, should be carefully avoided. The woman's safety depends largely in the sac's remaining whole. After the ovum is expelled, the hemorrhage usually ceases and the uterus quickly returns to its natural size and

position. To advance this process, the woman should be kept in bed and treated exactly as after labor at term. A neglect of this rule very often leads to uterine displacements and subinvolution.

2d—*When the ovum ruptures at an early stage* of the abortion, the hemorrhage is generally severe. The maternal tissues which are intimately blended with the foetal in the formation of the placenta, are very vascular, and the sac which in the first class tampons the cervix and by its direct pressure on the blood-vessels tends to prevent hemorrhage, is now wanting. There is, therefore, nothing to stop the flow and it continues sometimes until the woman's life is endangered. The diagnosis of rupture of the sac can be made by the amount of flow.

Suppose we are called to such a case; we find that the woman has been bleeding severely for some time. We make an examination and find the uterus enlarged and the cervix dilated, what are the indications? To stop the hemorrhage as quickly as possible. To do this we must empty the uterus. The finger must be passed to the fundus and the remains of the ovum quickly swept out. The uterus will then contract and the flow be immediately arrested.

But suppose that the cervix is not dilated, what shall we do? In the presence of such a case we are met with a variety of recommendations. One says, give ergot and lead, put cold clothes over her vulva and wait. Another advises to tampon the vagina and give ergot, hoping thus to stop the hemorrhage and get the membrane and placenta out. Another tells us to dilate the cervix at once, with the woman under ether, and remove all that we can find in the uterus with the forceps or curette.

That the hemorrhage should be stopped, all will agree, and for this purpose there is nothing more effectual than a tampon, well applied. It gives us time to revive the woman with stimulants, to get assistance if we need it, and to make all necessary preparations.

After the tampon has been in place from 12 to 15 hours, it must be removed, and usually we will find the placenta free in the vagina. But, imagine, that on removing the tampon, we find the cervix still undilated and the flow as severe as ever. In that case there is no use waiting any longer for nature, but we must take matters into our own hands. Further use of the tampon alone is not likely to do any good. Moreover, it is painful and may become dangerous. After having washed out the vagina with an antiseptic solution, a Sims speculum should be used, and a large tupelo tent introduced into the cervix, care being taken to get it above the internal os. The vagina may then be lightly tamponed, enough to keep the tent in place and the woman left. If the cervix is too small to admit the introduction of a good sized tent, then the steel dilators may be first introduced and the cervix carefully stretched until the tent, or tents—for several small ones dilate better and faster than one large one—can be easily placed in position. I much prefer the tupelo tent to sponge or laminaria, as being less dangerous. After 12 hours the tampon and tents may be taken away and the finger passed into the uterus and its contents removed. The embryo is scarcely ever there, as it escapes with the water and is lost among the first clots.

To pass the finger into the uterus, the woman must be put across the bed, with the hips elevated. If the abdominal walls are relaxed, the uterus may be forcibly pressed down with one hand placed over the abdomen, while the index finger of the other is firmly and slowly pressed to the fundus. If the woman is very restless and hard to control, and the uterus tender and painful, it is much better to give ether before attempting these manipulations. If the abdomen is very resisting or fat, ether will help relax it, or the uterus may be seized by a double tenaculum and pulled down and held firmly with one hand, while the other works inside. In this way the whole of the placenta may, as a rule, be easily removed without danger to the woman.

After the placenta has been removed, all bleeding usually ceases. Sometimes, however, it persists and becomes formidable. Under such circumstances a hypodermic injection of ergot may be given; or, what is better, because more easily procured, an injection of hot water (120°) carried directly into the womb. In fact, I make it a routine practice to wash out the uterus with a hot carbolized injection in every case when my finger has been introduced into its cavity. If the hot water and ergot fail, it is a very bad case, other measures must be the same as those usually taken in post partum hemorrhage. The finger is better than any instrument, unless the placenta is merely entangled in the cervix. It is softer and more under control and less liable to do harm than the ordinary placental forceps.

Let us now suppose another case. If, after the embryo is expelled, the uterus contracts and the hemorrhage stops, either before or after the use of the tampon, what is to be done? Here again authorities differ. But, if we adopt the plan of the more conservative of our advisers and let things alone, what may be the course of events?

The late Prof. Spiegelberg has well summed up the possible results of what is well called an incomplete abortion.

1st. Gradual elimination with frequent hemorrhages.

2d. In exceptional cases, entire cessation of hemorrhage, and after a longer or shorter period, perhaps months, strong uterine contractions, severe hemorrhage and expulsion of the placenta.

3. More often, decomposition of the placenta. The woman is then exposed to septicæmia. Continuous fever is the result which may cease with the expulsion little by little of the decomposing mass; more commonly peri-uterine inflammation sets in and may leave the woman an invalid for years.

4. Rarely, the formation of a fibrinous polypus around the placenta.

5. Rarest of all, I may add, absorption of all the placental tissue. Dr. T. G. Thomas and others have reported such cases.

None of these contingencies, except the last, and that is so rare that Spiegelberg does not mention it, are at all pleasant to contemplate. The chances of the third result, the decomposition of the retained placenta, are so good that it should, it seems to me, be considered the rule and our practice regulated accordingly.

I never could feel satisfied about a patient after an abortion, no matter how well she might seem to be, if I knew that she had a placenta remaining in her womb. I should, therefore, advocate in every case the early removal of the remains of the abortion and the placing of the woman in the best possible condition for recovery. The method of removing the placenta in these cases differs in no respect from that already detailed. When we meet with cases which have been neglected and where a decomposing placenta is *in utero*, the one thing to do is to get it out without loss of time. Even if the woman has a high temperature and inflammation of the tissues around the uterus has begun, it is better to remove the cause and give the woman a chance, for as long as the placenta remains, so long is she in danger.

I have often met with cases where the placenta has remained for days in the cervical canal, the internal os as well as the external being tightly closed. Decomposition is the rule in these cases and, although the dangers of absorption are not so great, still its removal should not be delayed after its recovery. Dilatation of the external os and seizure of the mass with broad forceps easily accomplishes this.

I have said little of the use of disinfecting solutions in the various stages of treatment, because I suppose the necessity is well understood. The method of properly applying a tampon may be noticed, because it is so little appreciated and practiced. To properly tampon a vagina, common cotton wadding (not absorbent) should be used. It should be made into balls, the size of a silver dollar, and then dipped into a solution of carbolic acid (3i to oj) and squeezed rather dry. There is no necessity of making a kite-tail affair, for this is cumbersome, takes time and is not so efficient. With a Sims tampon extractor, made on the

principle of a gun-wormer, the cotton can be extracted quickly and without pain to the patient. Having everything ready, the patient should be placed in Sims position and a Sims speculum introduced; then with the dressing forceps the balls of cotton should be placed around the cervix, so as to encircle it and tightly compress it. Then one piece, previously soaked in a strong solution of alum, if you like, should be placed over the os and the remainder of the vagina tightly packed. Made in this way, a tampon will resist hemorrhage for sometime. My only excuse for giving these directions is that I consider the proper application of the tampon of the utmost importance.

The mere stuffing of a handkerchief or bandage into the vagina will do no good and offers very little hinderance to the flow of blood. If no speculum is at hand, the perineum may be lifted by two fingers, or a speculum may be improvised from a table-spoon.

It may be noticed that I have been very sparing in my recommendations of ergot. I know this is the sheet-anchor with many, but I must say that I do not believe in it. If given before the cervix is dilated in this class of cases, when the sac is not ruptured, by forcing the uterus to act too violently, it is liable to do just what we wish to avoid, viz.: cause the rupture of the sac. If used after the sac is ruptured and when the uterus is contracted around the placenta, instead of helping its expulsion, it only makes the uterus grasp it more firmly and, moreover, does little towards stopping the hemorrhage. The only instance when it may be used with advantage, is in the case already mentioned, when, after the uterus is thoroughly emptied, there is a continuance of the hemorrhage. In such a contingency a hypodermic injection of ergot may be of great help: but even here it is not so reliable as an intra-uterine injection of hot water.

SOMETHING ABOUT OXALURIA.*

BY CHARLES G. STOCKTON, M. D.

In the year 1831, Dr. Wm. Prout described the oxalic acid diathesis; and in his lectures and writings announced certain peculiar views on the pathology of assimilation and secretion, which, at that time, attracted much attention.

Prout† held that the presence of oxalic acid in the urine was usually owing to a distinct diathesis, marked by symptoms of the irritable or nervous class rather than to the inflammatory and congestive, attended with irregularity of the heart's action, palpitation, flatulent disorder of the stomach and depression of the spirits reaching sometimes to hypochondriasis; that the primary assimilating processes were largely concerned, and that it was particularly in the mal-assimilation of saccharine aliments, and, perhaps, in extreme cases, those of an albuminous and oleaginous nature that the trouble began.

He stated that this diathesis was present with two classes; individuals of the sanguine temperament on the one hand and those of the melancholic on the other; that when the acid is produced *in the system*, the urine is transparent, pale, greenish yellow in color, free from sediment, and of moderate specific gravity.

Dr. Prout thought that the plan of diet in these cases should be similar to that adopted in diabetes, advising animal and sometimes farinaceous substances, but insisting that sugar should be excluded, and that the eating of it was almost certain to be followed by a crop of oxalates in the urine.

Golding-Bird confirmed and emphasized the views expressed by Prout, invented the term oxaluria, and by his book on urinary and stomach diseases, widely extended his belief.

But there were contemporaries of these men who opposed the theory of the formation of oxalic acid within the economy, accounting for the phenomenon upon the grounds held by Dr.

* Read before the Buffalo Medical Club, June 21st, 1882.

† Prout on stomach and urinary diseases, p. 124.

Owen Rees, as stated by him in the "Croonian Lectures" and his book "On the Analysis of the Blood and Urine in Health and Disease," viz., that oxalic acid depended for its origin upon the excessive formation of lithic acid, that the oxalate of lime was formed after the urine was secreted by the kidneys and was derived from the oxidation of uric acid and urates therein.

From the fact that a deposit of oxalate of lime is frequently found in normal urine after a day's exposure to the atmosphere, and, further, from the formation of oxalic acid by mixing yeast with uric acid and exciting fermentation (Wohler) and from somewhat similar experiments by Leibig, Lehman and others—it was, and still is held by many, that the formation of this acid is not within the fluids of the body at all, but in a decomposition of uric acid after the secretion of the urine, only.

Dr. Basham* presents this side of the argument very ably, saying: "The symptoms, then, of the disorder which Golding-Bird designated as oxaluria are closely associated with, if not dependent upon, a state of the organism which Dr. Murchison has very appropriately termed *lithæmia*, a condition in which oxidation is imperfectly performed and insoluble combinations of lithic acid and lithates, instead of readily soluble urea results," and further on he explains that this condition produces all the symptoms, frequent micturition, palpitation of the heart &c., described by Prout in his diathesis.

It would appear to a man having some experience with oxaluria that the position taken by Dr. Basham, *et al*, while possessing much truth, can be proven in error both in theory and practice, that, in point of fact, both Prout and Owen Rees are partly correct, that the formation of oxalic acid may be from abnormal metamorphosis occurring in the blood as stated by one, and also from changes taking place in the urine after secretion, but before excretion as claimed by the other.

And again, it would appear that the typical representative of the first class is a melancholic, nervous individual having cold

* Reynold's System of Medicine, Vol. III.

hands and feet, flushed and aching head, coated tongue, weak and rebellious stomach and heart; having rather too free secretion and frequent discharges of pale, greenish colored, transparent urine, acid in its reaction; having occasional attacks of renal colic and perhaps the passage of a calculus of calcium oxalate.

Eating saccharine substances and drinking hard water always exaggerate his sufferings.

The typical representative of the second class, once a sanguine, robust, active and stomach-loving man, adopts sedentary habits of life, following which he has sour stomach, constipated bowels, a peevish disposition, urine of deep color, high specific gravity, and loaded with uric acid, oxalate of lime and urates—frequent attacks of nephritic colic and discharges of gravel, which concretions are mixed, uric acid and oxalate of lime. This man has all the signs of lithæmia and finds greatest comfort by conforming to a non-nitrogenous diet.

Such illustrative cases are extreme, and all agree that these conditions may be satisfied with typical completeness without the presence of oxaluria; and, conversely, one may have oxaluria and even the formation of an oxalate of lime calculus with the development of none of these symptoms.

Dr. Wm. Roberts* says: I am strongly convinced that oxaluria arises from a variety of conditions, many of them not accompanied by appreciable departures from health, in which the assimilation of food or the disintegration of tissue goes on imperfectly; and that it is impossible to assign any constant train of symptoms as the cause or the consequence of oxaluria."

From these facts and considerations we may reach the following conclusions, which seem substantiated.

First.—Oxalic acid may be present in the blood as a result of mal-assimilation or imperfect disintegration; it may be eliminated by the kidneys in the form of oxalate of lime, thus producing oxaluria.

* Roberts *Urinary and Renal Diseases*, p. 81, -1876.

Second.—Oxalic acid may be formed from the decomposition of uric acid after its secretion by the kidneys and appear in the urine in the form of oxalate of lime.

To prove the first proposition there are many authorities to draw upon, besides some personal experience.

In a case, wherein, as a result of malaria and improper diet, there gradually appeared signs of indigestion with palpitation, head-ache, and frequent micturition, the urine became abundant pale, acrid and loaded with oxalates. These features were found to be aggravated by eating sugar or taking carbonated drinks, and to be alleviated when large quantities of pure water were taken, and the diet limited to a azotized or farinaceous foods.

The following articles are named in order with relation to their noxious effects:—Fermented cider, maple syrup or honey, cane sugar, soda water with syrups, lager beer and other carbonated drinks. Fat and lean meats and starchy foods (especially when taken with extract of malt) were assimilated with comfort.

Now in this case there was not, at any time, marked excess of uric acid in the urine, and probably not in the blood, while there was marked oxaluria, the discharge of a pure oxalate of lime calculus and probably oxalic acid in the blood. Notwithstanding the statements of Dr. Owen Rees that oxalic acid is not found in the blood, we know to the contrary, because, after oxalic acid is taken into the stomach, it rapidly appears in the urine; and moreover, because Dr. Garrod has repeatedly detected this acid in the fresh blood and sweat. This observer,* in 1876, writes as follows: "Some years since I detected oxalic acid in the blood of a patient laboring under albuminuria. * * * The acid was separated from the watery solution of the serum, mostly in the form of octohedral crystals of oxalate of lime, but mixed with small oval bodies, somewhat resembling the dumb-bell varieties of this salt. I have also examined the blood for this acid in many cases of gout and have frequently detected it; my impression is that it chiefly occurs during the inflammatory

* Garrod on Gout and Rheumatic Gout, p. 112,

stage of the disease, and is probably derived from the oxidation of the uric acid. The whole subject, however, is beset with difficulties, and, until many observations have been made, I should not wish to venture any positive statement, except as to the fact of the frequent occurrence of oxalic acid in the blood." The experiments of this writer regarding oxalic acid in the sweat are worthy of perusal and may be found in his work referred to above. Several cases have been reported in which oxalate of lime was found within the substance of the kidney.*

Oxalic acid is found in the urine after the injection of urates into the veins.†

Probably enough is already said to verify the first of our conclusions, but further evidence is readily accumulated from the works of English and Continental writers.

Our second proposition seems to be admitted by all recent writers; and the fact that oxalic acid frequently does appear, cannot be a matter of surprise when it is remembered that oxalic acid results from the oxidation of uric acid.

This abstract from Liebig‡ is worth reading. "It is a common occurrence in France among patients suffering from calculous complaints, that, when they go to the country, where they take more exercise, compounds of uric acid, which were deposited in the bladder during their residence in town, are succeeded by oxalates in consequence of the increased supply of oxygen. With a still greater supply of oxygen they would have yielded in healthy subjects only the last product of the oxidation of uric acid, namely, carbonic acid and urea."

Whether or not oxalic acid appears in the blood as the result of the oxidation of uric acid, it unquestionably exists as the result of such oxidation after the secretion of the urine, for it is a common observation that normal urine, when exposed for a few hours to the atmosphere, shows an abundance of oxalate of lime crystals at the expense of uric acid.

* Ziemssen's Encyclopedia, vol. xv, p. 630.

† Draper's Physiology, p. 222.

‡ Uric Acid and Urea, p. 45.

Thus oxalic acid, as it appears in the urine, represents an intermediate stage in the oxidation of the more complex organic substances; and whenever oxidation is seriously retarded, we may expect its presence, and besides in indigestion, it often appears in anæmia, the convalescence of severe fevers and chronic pulmonary diseases, also, after drinking certain carbonated beverages, as champagne, cider, etc.

I can find no authority to that effect, but I strongly suspect that quinine aggravates the disorder when taken during an attack of oxaluria, even if it does not sometimes bring about the same; which suspicion will not appear unnatural when we reflect that, according to accepted investigators, quinine lowers the temperature by lessening the oxidizing function of the blood.

Agents that assist or retard oxidation might be discussed with advantage, as also might the treatment of, and the proper diet to be observed in cases of oxaluria, but these matters are omitted as I have already, in accordance with the title of the paper, said "Something about Oxaluria."

Clinical Reports.

A CASE OF EXCESSIVE MASTURBATION IN THE FEMALE, WITH AN UNUSUAL METHOD OF PERFORMANCE.

REPORTED BY J. H. PRYOR, M. D.,

Resident Physician Buffalo General Hospital.

Miss K. T., æt. 32, single, domestic, Scotland, entered hospital July 16, 1882, accompanied by Dr. Hopkins, of Silver Creek, who gave the following history: Patient is a chronic masturbator who has kept up the practice for years without her relatives' knowledge. Three days ago, in a fit of despondency caused by the fear that she had permanently ruined her health and shattered her mind by the excessive indulgence of the day before, she procured a knife and endeavored to end her exist-

ence. The doctor was summoned, and the truth became known. It was thought advisable to gain admission for her into some institution where she could be watched and her mind directed to other matters. Her presence is typical: she has the pimply, nervous face; the downcast, furtive glance; the jerking, nervous motion: an air of one deeply lost in unpleasant thought, with a cringing, fearful manner; is very talkative, but speaks only of herself; while in conversation her gaze is directed to her hands, which she seems to be examining closely; blushes easily. On referring to her habit, she weeps and gives a shrug of horror. Her language is devoid of all obscenity. She seems not to be depraved or incestuous, but talks like one in deep grief and humiliation; has dyspepsia with a ravenous appetite; insomnia, cephalalgia, deafness at times, constipation, dry mouth and tongue, stammering badly at times, and occasional cardiac palpitation; is also very anæmic; menstruates regularly. When pressed for a complete history, she stated that when five years old she used to amuse herself by a peculiar swaying of her person, each time experiencing delight and pleasure from its performance. For this reason she became addicted to this habit. Her parents noticed it, but thinking it a childish freak, did not reprimand her nor speak of its baneful influence. Thus she continued first for pure enjoyment, then as a solace when in trouble or sorrow. "When things went wrong this furnished the needed relief from worry."

Again she would be very excitable, her head would throb and ache, her mind would be a babel of thought; an indulgence would leave its sedative influence to calm her. Finally this act became essential to preserve her nervous equilibrium. By this method she could make her morbid thoughts and feelings something akin to those of other folks. It enabled her to depress and control a heightened and rosy imagination, and to free herself from the grasp of a melancholy and dejected mood. At first she would defile herself but once a day, but later she became as much a slave to it as the opium eater to his drug.

If a simple task devolved upon her, she must needs resort to this act to gain the composure and steadiness necessary for its performance, and it alone ensured a sleep full of bright and radiant dreams. Of late years trouble has been the principal incentive to pollution, in her serener moments the thought of her self-abasement and wrecked life driving her to desperation. At such times her masturbation became painfully excessive, having frequently spent hours in wild enjoyment, which was so nearly allied to pain, that it leads me to think that it must have been associated with her mental delirium. Now there came a lull when she suffered. For four long months she endeavored to be a woman, but something tripped up her resolve and she fell away down into the depth. This marked the commencement of a period of groveling and despair, which ended on the morning of her suicidal intent. When I asked her in regard to her method of pursuing this habit, she said that she could show me better than she could tell me, and straightway falling upon her knees before a chair, she let her elbows drop upon its seat and grasping the arms with a firm grip she commenced a swaying, writhing motion, seeming to fix her pelvis and moving her trunk and limbs,—this for a moment—then every muscle was rigid, in contraction, her face borrowed a demoniac expression; the features were contorted; the eyes rolled; the teeth set and lips compressed, while the cheeks wore a purplish flush. Thus she remained for a time a most revolting spectacle. Upon rising she explained “that it only took a moment to commence, but that the reveling lasted for a long time. She then showed me her knees which bore the marks of her yesterday’s debauch, being skinned and swollen with some old ecchymosis, indications of times gone by; also remarking that often her muscles were so lame the day after an indulgence that she could scarcely lift her hand. Not being able to understand how the orgasm could be thus produced, I took occasion, a day or two later, to question her explicitly in regard to this point. She answered that the swaying induced a pleasurable sensation, which was

probably caused by suction being brought to act upon the clitoris. This suction she describes distinctly, and says that almost immediately after something bursts, and then comes the rapture which is prolonged for an indefinite time. Probably the sensation of something bursting is caused by the discharge from the vulvo-vaginal glands. I am at a loss to explain the greatly prolonged orgasm which she describes; whether it be a psychical delusion or a physical phenomenon I do not know, but it seems eminently proper that I should state here that if it be a delusion I have never discovered another. She has tried other methods of masturbation, but finds them very unsatisfactory. An examination revealed a slightly enlarged clitoris slightly congested and tender; vagina somewhat tender; uterus normal. The patient was placed in the ward under observation; given some work, also baths, iron and light doses of pot. brom. If she chanced to speak of the irreparable injury she had done herself, a firm assurance was given her that this was not true and that she would certainly and surely get well. To-day, Aug. 14, the improvement is very marked; she has gained in flesh; is more cheerful; complains very little of headache, and believes that she will recover. So far as can be learned she has not resorted to her old practice. Whether her recovery will be permanent is a question, as she probably will not remain here a sufficient length of time. I have searched the literature as far as I am able to, and fail to find a similar case recorded. I therefore present it more for its oddity and strangeness than for any practical thoughts or knowledge which it affords or suggests.

Society Reports.

MEETING OF THE BUFFALO MEDICAL CLUB.

The regular semi-monthly meeting of the Buffalo Medical Club, was held Aug. 9th. The subject for discussion was the Revised Code of Ethics of the New York Medical Society. Dr. H. R. Hopkins presented the affirmative argument, and Dr. W. S. Tremaine, the negative. We present their papers in full.

DR. HOPKINS' PAPER.

MR. PRESIDENT AND FELLOWS—In presenting an affirmative argument upon the question of the wisdom of the Revised Code of the New York Medical Society, I am not unmindful that such an argument is not in harmony with the sentiments of a large majority of our profession. My excuse for differing with that majority is the simple fact that they have not yet deigned to set forth any facts or arguments to show why the new code is not a wise rule of conduct. Of resolutions, declamations and proclamations there has been more than sufficient; of pertinent facts, argument and reasoning, we have had a continuous dearth.

I state this before hearing the able argument of our Fellow who is to present the negative side of this question, in order that, in case it becomes my duty to report my conversion, he may have the greater glory.

Our Code of Ethics is a formal expression of the sense of the medical profession, of the ideal relations which should exist between the individual members of the profession, between the members of the profession and their patients, and between the medical profession and the public at large. The expounding of such a code is a solemn and pre-eminently important act, as it attempts to fix the rights of the individuals of the profession, the rights of the sick and afflicted who may seek our aid, and the rights of the individuals of our people at large, so far as those rights are concerned with our duties or privileges.

It must be plain to all that a code of ethics can not be properly conceived which asserts the rights of one portion of our people to the exclusion of the rights of another, no matter however few in number or insignificant in influence that minority may be. A code of ethics may ask the individual of its class to deny himself, and to forego some temporary advantage for the sake of the general good, but it can never ask an individual to wrong, or to debar the rights of another upon any plea whatsoever. The associated profession is an important member of that family of associations, which make the state, and her official formulas must be written in the key of universal tolerance, in harmony with the principles for, and by which, the state was founded.

It is frequently remarked that this is a trivial matter which concerns the profession only, but to correct so false an impression it only needs to be stated, that in fixing our relations to our patients, we in so far define and limit the rights of those patients, and in nominating the relations which the profession should maintain to the public, we, in the same degree, limit the rights of the public. That this is the correct view of the importance of our code, there can be no doubt; consequently no more momentous matter can come to our consideration.

We saw that our code of ethics must be so formed as to zealously guard the rights of the people, not of our class, for whom we speak. I am glad of the chance of saying to you, that the codes of our fathers, in this respect, could defy criticism. Before proceeding, however, to this part of our argument, we will do well for a few moments to consider the question, why we have a code of ethics:

The medical profession of this State, as an organized factor of society, dates from April 4th, 1806. On that day the people recognized the individual physicians of the State, and raised them to a privileged class distinguished from their fellow citizens, by the possession of certain rights and privileges, duties and responsibilities. Chief among these rights was that of assembling

and organizing State and County Medical Societies, into whose hands was placed the entire responsibility of the profession of the future. This control of the future of our profession was provided for by a grant of authority to our State and County Medical Societies, to enact by-laws for the government of their members, relating to the granting of licenses to practice, and to the conditions upon which members were in the future to be admitted to such societies.

The New York Medical Society, incorporated April 4th, 1806, was duly organized on the first Tuesday in February, 1807, and at that time adopted by-laws containing the following ethical provisions: "Any member of the said society who may have "been convicted of any serious offense against the laws of the "State or of the United States, or who may guilty of gross immorality, or who shall have improper pretensions to any "specific or nostrum, or who shall be repeatedly be guilty of improper conduct in the duties of his profession, or his behavior "in this society, may be expelled at an anniversary meeting "upon a vote of two-thirds of the members present." This with a by-law declaring that it is inconsistent with the dignity of the medical profession for physicians and surgeons in their corporate capacity to arrange and fix professional charges was the wisdom of the fathers upon the subject of ethics, and by these principles they were governed for the years between 1807 and 1823. At this time a formal code was adopted entitled a "System of Medical Ethics." This system was the result of the labors of a committee of the most eminent medical men of their times. The committee was appointed February 8th, 1821, was ordered to sit again February 5th, 1822, and made their report February 6th, 1823. This code was in force from 1823 until 1849, when it was superseded by the code of the American Medical Association, which our State Society at its last meeting, February 7th, 1882, revised.

I would call your attention to one provision of our code of 1823, as illustrative of the temper of the medical profession of

that time, Section VIII, Specifications of Medical Ethics in Practice: "Honor and justice particularly forbid a medical practitioner infringing upon the rights and privileges of another who is legally accredited, and whose character is not impeached by public opinion or civil or medical authority, whether he be a native or a stranger settled in the country. There is no difference between physicians but such as result from their personal talents, medical acquirements, or their experience, and the public from the services they receive, are the natural judges of these intellectual advantages."

You will observe that the expounders of our primitive codes were keenly alive, to the importance of recognizing and protecting the rights of the people for whom they assumed to speak. You will also remark the close similarity of language between the codes of 1823 and 1882.

"Legally accredited" says 1823.

"Legally qualified" responds 1882.

I must hasten to briefly sketch the situation which was presented to the committee appointed at the meeting of the New York Medical Society in 1881 for the purpose of revising our code. They find in operation a code of alleged ethics which practically forbids the members of the medical profession from recognizing as physicians the members of the homœopathic profession. This code has been in operation since 1849, and since 1857 its operation has been as follows: An attempt to abridge the rights of the homœopathists by refusing to recognize them as physicians; an attempt to abridge the rights of the individual members of that profession by not meeting them in consultation, and an attempt to abridge the rights of our people who wish to employ homœopathists and, when desired, to have the benefit of our consulting attendance. This construction of the code of 1849 is based upon the action of the law of 1857, creating the homœopathic profession and the assumption that a physician is not warranted in refusing to recognize, as a physician, another of "good moral character and legally authorized to practice

medicine," because he does not like the manner in which he parts his hair.

That to be entitled to all the rights and privileges of the practice of physic and surgery under the laws of the State of New York, is to be entitled to the services of other physicians similarly authorized, in consultation, when desired, by himself or his patients.

Besides these wrongs in our modern ethics, there was the greater wrong to ourselves; to our record as scientific students, in the attempt to maintain the untenable, unscientific negation. That a well educated, honest and careful homœopathist in a life-long study of disease, can not observe anything which can be an addition to the knowledge of a member of our profession. In my judgment the existence of these wrongs in our code of alleged ethics was sufficient reason for a revision.

Practically the most dangerous wrong in our code is the wrong we do the people who patronize homœopaths. It had been the habit for members of the medical profession to fight homœopathy and occasionally to fight homœopathists, and it was our right and duty so to do any time prior to the year 1857. But at that time, in spite of all our fighting, the homœopathists won from the people of the State of New York recognition as physicians. The birthright which was bestowed upon our profession in 1806 was not taken from us, but was extended to them, and the medical future of the Empire State became our joint care. Unfortunately the habit of fighting homœopathy had become so fixed that we have continued the practice up to the present, in forgetfulness that now we are not fighting the members of the homœopathic profession, but that we are attempting to fight the people of the State of New York.

The statutes have declared and the courts construed the statutes to mean, that they are physicians, while we continue to shriek in hysterical tones: "But we tell you they are quacks." We may be positive that this course is not right, and absolutely certain that it is not expedient. This matter must be so stated

that it cannot be misunderstood and at the risk of being tedious. I will repeat what seems to me to be the basis of my argument.

The rights of the New York medical profession are legislative grants from the people. We exist by the will of the people, for the good of the people, and the people have the right to ask, and if need be, to demand our services. The claim of the people upon the services of our profession lies upon the same plane as the right to life, liberty and the pursuit of happiness, and it does not rest with us to say for what cause, or when, the people have forfeited that claim. Every right, which we enjoy, has also been possessed by the homœopathists since 1857. Our code of 1849 fails to recognize the rights of the homœopathists as a profession, as individuals, and the rights of the people who wish their services.

Since the year 1857 our code of ethics has been at variance with and in defiance of the laws of our State; has been sectarian, intolerant, and unscientific, and its reformation is called for by every argument of fidelity, justice and expediency.

As a profession we seem to have very misty ideas as to the origin and nature of our rights. I have conversed with some of our leading men who seem to think that we have an exceedingly ancient, or, perhaps, divine commission; that, by virtue of our Hippocratic oath, we are responsible only to the traditions of the profession, frequently another name for party prejudices, whereas the fact is simply this: That our profession owes its existence, and we owe our individual professional rights to the people, and as our rights and privileges constitute an exceedingly valuable franchise, the law zealously guards that franchise from spoliation.

This we seem to be able to comprehend as applied to ourselves, but utterly unable to grasp or to apply to the homœopathists, although we were fashioned by the same hand, with equal rights and responsibilities. Unless these propositions and this reasoning can be overthrown, the need of revision of our code is demonstrated.

Do not let anyone understand me as maintaining that the action of the Legislature creating the homœopathic profession was in any manner or degree wise, for such is not my mind, it is simply my opinion that it does not rest with us to pronounce upon the wisdom or the unwisdom of that legislative act. We had, and still have all the responsibilities we can well account for, and the people reserve to themselves the right of sitting in judgment upon the consequences of their enactments. The code of 1823 says: "*The public from the services they receive, are the natural judges of the respective advantages of physicians.*" Neither is it for us to consider in this connection the scientific aspect of the homœopathic faith or the advantages, or otherwise of the homœopathic practice. It would seem that in its corporate capacity the medical profession of this State has now no call to consider or discuss either part of this question. The people have desired that the question of homœopathy shall be put to the experimentum crucis of actual practice and open observation. The medical profession had the opportunity, and the code of 1882 gives it to us again, to see that the conditions of the experiment are accurately and faithfully observed, but we have no call to either plead the case or boycott the jury.

Again it seems that there can be no question of the incorrectness of the code of the American Medical Association, viewed from the scientific standpoint. As before stated, the logical action of the code was this: No matter how great a man's intellectual qualifications may be, or how rich and varied his observations, if he is a homœopathist, he has never seen anything, he can never see anything which can inform us or benefit our patients.

This is the action of the code of the American Medical Association, and for revising this in our State so as to allow our members to act upon their own judgments when asked to meet legally qualified physicians, that Association practically closed its doors upon the profession of the Empire State.

The absurdity of this action gets to be pretty plain when we look at the history of the profession in our own State. In 1806

the people put the future of medical profession into the hands of the corporate bodies, the State and County Medical Societies. By their by-laws they were to say who should study medicine; how they should study; how long they should study; when and how they might graduate; how they might join their societies and become practicing physicians and surgeons, and how they should continue in, or be expelled from that practice; never was a more royal trust more freely bestowed.

And what did we do with it? We turned to and filled our state with private corporations whose business was to sell the degree M. D., the same being a license to practice physic and surgery anywhere in this State or in the United States.

What preliminary education did we require of these candidates for the honor and responsibilities of the practice of medicine? None at all.

What term of study did we exact of them? Not any. How many courses of lectures must they attend? Not one. What clinical advantages must he have? He was never inside of a hospital, save as a patient. What examination to test his ability, to meet the duties for which he is about to be certified as well as qualified to perform, must he pass? None at all. If he was capable we were glad of it and hoped he would stay in the city and send us students. If he was incompetent, we were sorry; but if we did not graduate him, our neighbor in the next town would and we needed his money.

What was the result? The people, the natural judges of the respective advantages of different physicians, said in 1857: We have found the homœopathists to be about as good as our regular doctors, at any rate they are not much worse, and we will see how they will get on together.

How does this action affect us? We, at once, are all alive to the great danger which the public are bringing upon themselves, and we warn them in our code of ethics to beware of the homœopathists, who are not physicians at all. So great is our solicitude that we will not permit our illiterate, incompetent

holder of a purchased diploma, to take for himself or for his unfortunate patients, the council of a man, who has all the advantages of literary, scientific and professional training, which the universities and hospitals of Europe and America can furnish, but who is a homœopathist. The fact that his opinion differs from ours as to the curative action of drugs, makes him dangerous in spite of his exalted personal character and his extended scientific and professional acquirements.

The American Medical Association disfranchises one-tenth of the medical profession of the United States for recognizing this man as a physician, but is as dumb as an oyster at the practice of wholesaling medical diplomas.

You may look far and wide before you can match the absurdity of the spectacle of the American Medical Association, straining at the gnat of a homœopathic globule, after having annually for 35 years swallowed, with alleged satisfaction, the camel of American medical education.

Before concluding I must remark in passing upon what seems to be a unanimous misconception of the supposed action of the code of 1882.

It would seem from the reports of all the official actions and most of the individual utterances upon this subject, from the august American Medical Association down to the humblest local medical society, that the logical action of the code of 1882 is to recognize homœopathy, hahnemanism, infinitesimalism, and all the allied delusions.

That to meet a man in consultation, is to extend to him full fraternal recognition, to undertake to confirm his diagnosis and to support his treatment. This seems to be the popular conception of the action, and the only possible action of our new code; and I wish simply to remark that nothing could be more false or misrepresenting. To my mind the action of the new code is: first, to say to the people we bow in acquiescence to your authority and recognize the homœopathists as physicians; second, to say to the homœopatists, "we will meet you where,

and when you will, and treat you with exact fairness and justice, recognizing that consultation is for the benefit of the patient, and that in case we disagree, as we are likely to, regarding diagnosis and prognosis, and are sure too about treatment, we will be governed by our code for such cases made and provided." That legal recognition and consultation, means or necessitates full fraternal recognition and relationship, I am sure never for a moment entered the minds of the framers or advocates of our new code. The general impression seems to be that, willingness to consult implies on our part all the rest; to my mind it simply implies formal official recognition of the relations of the homœopathists to the State. We accept their credentials and allow the developments of the future to decide whether their relations to us will ever be more than formal recognition. The laws of the state, the temper of our people, and the genius of our institutions demand this, but as we are not allowed to proscribe them for opinion's sake, they can not coerce our endorsement of their doctrines.

In conclusion I would call your attention to a few reasons in support of the expediency of the action of the New York Society in adopting the code of 1882. By expedient I do not mean the lower as preferred to the higher interest, the present to the future good. In my conception expediency has nothing in common with worldly wisdom, cuteness or sharp practice. I use the term only in its higher and more comprehensive meaning as synonymous with fit, appropriate, judicious, wise.

For instance, one might say that it is expedient for us everywhere and always to keep in mind that we, as members of a learned and honorable profession, stand among the higher orders of society, and that our lives and characters should be in harmony with the dignity and responsibility of our position. Also, that it is expedient that we should not forget that medicine is neither an art nor an exact science; that the problems we have mastered, are to those which lie before us, as the drop to the bucket; that we have small occasion for

sweeping generalization, save in mentioning what we do not know ; that from the nature of our work, from the immensity of the responsibility involved in our work—the preservation and restoration of health—we can not afford to shut our eyes to the most seemingly trivial fact, connected with the history or the management of disease. Who would dare belittle the importance it would be to medicine to have the chance of correcting our views of the life history of disease, by the opportunities which homœopathy continually *presents us of studying disease uninfluenced by treatment*. When a reasonable number of our people are daily offering themselves as material for this experiment, it is certainly expedient for the medical profession to be critical students and observers of the process and its results.

Notwithstanding the rapid strides of histology, pathology, physiology and chemico-physiological therapeutics, medicine will for a long time remain as it has ever been in the main, a matter of empirical observation, and it will be expedient for us to first demonstrate to the satisfaction of the people, that homœopathy has not a single kernel of wheat to the bushel of chaff, before issuing our decree of proscription

There is truth in homœopathy, or there is not ; if there is, it belongs to us, and it is expedient for us to determine this fact, and to take our own. If the truth is not there, not even the bad legislation of its enemies can keep it alive.

In conclusion it is expedient for us as individuals to live as humble students of the yet-to-be science of medicine, and as obedient citizens of the State, remembering “that the submission of a free people to the representative authority of government, is no more than a compliance with laws which they themselves have enacted,” remembering, that if we have put upon us burdens grievous to be borne, the patient bearing of them will hasten the time of our deliverance. It is expedient for the medical profession to regulate her official formulas in harmony not only with the letter of the law, but more than this, in harmony with the spirit of the times, which writes experiment

and tolerance, in place of dogmatic assertion. It is also expedient that we discuss this question without class bias or prejudice, which makes me think, that the full measure of expediency is not always easy of realization

DR. TREMAINE'S REPLY.

MR. PRESIDENT AND FELLOWS—In obedience to your vote, I shall endeavor to reply to the arguments of my Fellow on the affirmative side of the question, Shall the action of the New York Medical Society in its revision of its code in regard to consultation be sustained?

I confess, sir, it is difficult for me to approach this subject with anything like an ordinary degree of patience. Why should a body of intelligent, well educated men find it necessary to discuss such a question? In looking for an answer, I discover in this good city of Buffalo, that, notwithstanding its large body of accomplished and able medical men, it is positively reeking with the poison of medical heresies. "Pathies" and "isms" stalk abroad at noonday and find their support and countenance from a large class of the community who would probably act differently were they well instructed in regard to the narrow-minded bigotry and pretentious humbug of all "isms" and "pathies," no matter what prefix soever may be used to the particular pathy. I pass over the ill-logical demand of my learned friend who calls upon the majority "to prove a negative" and asks your attention for a moment to exactly what is said in the new code under the head of "Rules Governing Consultations:" "Members of the Medical Society of the State of New York and of the medical societies in affiliation therewith, may meet, in consultation, *legally* qualified practitioners of medicine. [The italics are mine.] Emergencies may occur in which all restrictions should in the judgment of the practitioner yield to the demands of humanity."

On the face of it this gracious permission seems especially fair and broad-minded, and one wonders why such permission should be necessary.

Certainly no such liberty is required as regards *qualified* practitioners of medicine. The force then of this lies in the estimation accorded to the word "*legally*."

I am not familiar with the exact terms of the statute which *legalizes* the practices of medicine in this State, but fortunately my learned Fellow has furnished me with the information with which to attempt his "conversion."

The true inwardness of this section of the code of ethics my friend supplies when he uses the term "members of the homœopathic profession." !!! Homœopathic profession! I cannot believe that he, an accomplished, educated physician is one of those mistaken mortals who recognize "schools" in medicine, but he has used the term and seems desirous for permission to recognize and consult with what he terms the "homœopathic profession," and tells us that we abridge the *RIGHTS!!* of the homœopathists by "refusing to recognize them as physicians, and by not meeting them in consultation."

This then, sir, divested of all rhetoric and sophistry, is the especial purpose for which this revision of the code was enacted, and here let one pause to thank our Fellow for furnishing us a true explanation of this apparently harmless and liberal section of the new code.

Be it so! We accept his assertion as the true intention, and this leads us to inquire into what is this homœopathy, and who and what are these homœopathists whom he is anxious to reach out to, and take into fellowship *unasked* and *unsought* by them. I take it, sir, it is fair to judge of any sect by their published creed, and here is the creed of the homœopath.

1st. That diseases are dynamic changes in a vital principle, or in other words, are spiritual entities not depending upon material substance.

2d. That the cure of disease is most easily and completely effected by drugs, therapeutic action of which closely simulates the symptoms of the disease itself, and that the probability of a favorable result increases with the exactness of resemblance or similarity.

3d. That the power of drugs increases with their attenuation, which may be carried to an almost unlimited extent.

4th. That trituration or agitation confers new and augmented power upon the drug so treated.

As to the first of these propositions, I commend to its author the advice of Herbert Spencer, to "translate our words into thought."

I frankly confess my own inability to comprehend its meaning, nor do I believe it possible for any human being to understand what is meant by it.

In regard to the second article of faith, it is in short the new familiar fallacy of "*similia, similibus curantur*," which I am told is practically abandoned by the disciples of Hahneman.

I learn that the attenuation doctrine is now somewhat limited and does not usually go beyond the "30 dilution." That the higher dilutions, i. e., from the 100th to the 200th are not generally adhered to. In order that my friend may be posted before his consultation, may we not inquire what this 30th or comparatively low dilution means? It means, roughly speaking, drop of the "mother tincture" diluted with a quantity of water equal to more than 40 worlds of the size of ours. But perhaps the consultant avows himself a believer in the 40 dilution, which needs 450 billions of worlds of water, and yet modern homœopathy tells us that people are constantly cured by doses of the 100 dilution.

These dilutions must also be carefully made according to the "*Pharmacopœia, Homœopathica, Polyglotta*" which directs it to be shaken with ten vigorous downward strokes of the arm. Hahneman, it seems, at first applied only "two shakes of the arm," but later he gives "ten shakes of the arm" as the

normal number, and retracts his former direction. Will my friend kindly inform us what "rights of the public" can be secured by consultation with one laboring under this phase of lunacy? Would it not be better that their "rights" be for the time ignored, and their lives and health better protected by our refusal to recognize as physicians persons evidently so intellectually weak as to believe in such wretched nonsense. I scarcely think he or any other member will avail himself of the gracious permission of this wonderful code, even to secure their rights to the dear public. But, sir, it would be an insult to the intelligence of this body to offer at the present time such a work of super-erogation as a refutation of homœopathy.

You, my Fellows, *know* there is no such thing. Assuming then our duty to guard the "rights of the public," so emphatically insisted upon by our Fellow, we should refuse to countenance, directly or indirectly, this delusion which exists only in the imagination of the *soi-disant* educated portion of the community, but rather regardless of "expediency," demonstrated by our action to these deluded people that this is a false and exploded doctrine, no longer adhered to by its self-styled disciples. My friend informs us that there exists in the community a class of legally qualified practitioners, called homœopathists, with whom it is our duty to consult. If these people believe in their published creed, about as much benefit would result to the patient from a consultation with one of them as would in a law suit from a conference between an eminent lawyer of the Buffalo bar and a legal light of the Fiji Islands.

If they do not believe in and practice their theory, but profess to, they are imposters and unworthy of the recognition of honorable medical gentlemen, either professionally or socially. But my friend continues his specious argument and tells us "no matter how great a man's intellectual qualifications may be, or how rich and varied his observations, if he be a homœopath, he has never seen anything, he can never see anything, which can improve us or benefit our patients." I am at a loss, sir, to know what code of ethics makes any such assumption or

prohibition. Paradoxical as it appears to me, if it be as my friend implies that there exists an intellectual person with "rich and varied observation," and yet a homœopathist. I know of no law or code which prevents his deriving all the information or instructions that he is capable of at their hands.

I confess I do not see the benefit to accrue to a patient by his pursuing his studies at the bedside of the unfortunate, with his intellectual instructor in consultation. If he desires to dip into the rich mines of knowledge which he seems to think may be locked somewhere in the shallow depths of homœopathy, its publications are open to him, a privilege which he no doubt, in his broad liberality, would accord to the homœopathists, and which, sir, you and, I have no doubt, they avail themselves of liberally without permission.

Possibly there may be homœopathists possessing all the advantages of "literary, scientific and professional training which the universities and hospitals of Europe and America can furnish." I have, unfortunately, to confess my unfamiliarity with such a class, if such there be, and I cannot, of course, deny the assertion. I see no good reason why they should not join in with and add to the great body of regularly educated and professionally trained practitioners of medicine, whether of the "hospitals of Europe or America." *If they are scientific men, earnest seekers after truth, they would naturally associate with others of like character, without any test of exclusive dogma, or especial article of faith, but in the broad, catholic spirit of science, left free to indulge in any mental gymnastics they please about the action of medicines so long as they do not attempt to carry them into practice in violation of known physical laws.*

The American Medical Code of Ethics does not mention directly or indirectly any "pathy," but simply states "a regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of

his profession. Nevertheless, as in consultation, the good of the patient is the sole object in view, and this often depends on personal confidence. No intelligent, regular practitioner who has a license to practice from some medical board of known and acknowledged respectability, recognized by this association, and who is in good moral and professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation when it is requested by the patient. But no one can be considered as a regular practitioner or a fit associate in consultation where practice is based on an *exclusive dogma*, to the rejection of the accumulated experience of the profession and the aids actually furnished by anatomy, physiology, pathology and organic chemistry." Again, paragraph 6, "In consultation theoretical discussion should be avoided as occasioning perplexity and loss of time, for there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded not on hypothesis but on experience and observation." Can anything be broader or more liberal? Its requirements are simply *ability* and *respectability*. Surely our friend will not ask us to abolish these tests in order that he may consult with his homœopathic friend! Nowhere in any code of ethics of the medical profession is homœopathy or any other "pathy" alluded to. The plain requirements being a medical education, and a renunciation of bigotry, or in other words "exclusive dogma," but not to weary you, my Fellows, our friend begs the question. The summing up of the whole matter is that he requests us as regularly educated, qualified physicians to condescend to consult with and recognize narrow-minded and bigoted professed practitioners of a popular medical delusion. As well might we ask the great body of learned scientists to step down, and acknowledge the traveling conjuror as one of themselves, because some of his tricks may be explained on scientific principles. My friend has much to say about the law compelling us to recognize the disciples of exclusive dogma, which he terms

homœopaths. If he will permit me, the law has no authority whatever in this matter. It is not within the province of the law to dictate a man's professional, literary or social companions. The qualifications they should possess is indicated by the code of ethics as quoted; the *prima facie* evidence of fitness being the possession of a diploma from a medical college where the sciences, which are essential to a liberal medical education, are fully taught by a competent corps of instructors. This at least is presumptive evidence that its possessor has had the *opportunity* to acquire the necessary qualification. That this evidence is not always conclusive, I deplore as much as any one can, but with the present indifference or ignorance of our Legislatures it is probably the best obtainable. Medical societies and State examining boards frequently reject diplomas from colleges, in their opinion lacking the necessary curriculum, no matter how *regular* they may claim to be. I have no doubt that if my friend knows of instances of diplomas having been improperly given, that such an impropriety would be severely dealt with by the profession, and the unworthy possessor excluded, if the matter was investigated. As a would-be guardian of the *rights* of the people his duty is clear in the premises.

It is puzzling to understand why this special form of delusion, i. e., homœopathy is selected for recognition. Why not in this solicitude for the "rights" of the people include in the prospective benefits from the new code all the other "pathists," such as vita-pathists, hydropathists, mesmerists, magnetic healers and manufacturers of "medical discoveries," etc.?

Are their claims to be neglected and their "rights" ignored, because they are in the minority? I would suggest, instead of wasting time in fruitless discussion about codes of ethics, we all, regardless of our pet theories, unite in an earnest practical effort to furnish the people with properly educated, competent practitioners of medicine, which might be done by having a State Board composed of medical men of well-known ability, and one or more highly educated scientific laymen, which board

only should have power to grant a license to practice medicine; that this Board, before so doing, should examine thoroughly into the applicant's proficiency in general educational branches, and professionally upon anatomy, physiology, pathology, chemistry, surgery, obstetrics and hygiene. No member of this board to be connected with any medical college. If an applicant be found qualified by such an examination he will not be likely to make serious mistakes, no matter what peculiar theories in regard to the action of remedial agents he may hold. By adopting this plan we would probably do away with any excuse for "schools' or "pathies," and so protect the "rights" of the people against ignorance and medical delusion.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Regular Meeting, August 7th, 1882.

President, Dr. A. R. Davidson, in the chair. Dr. C. M. Daniels, Secretary.

Present—Drs. Cronyn, Wm. Ring, Mynter, Samo, Burghardt, Rochester, Runner, Mann, Hauenstein, Gay, C. A. Ring, Hopkins, Kamerling, Bartow, Dorland, Fowler, Cary, Hartwig, Strong, Moody, Brecht, Macniel, Bartlett and Barnes.

By invitation, Drs. Heath, Frank, Long, Berkes, Potter, Frederick, Tremaine, and DeLancey Rochester.

Election of new Members—Drs. M. D. Mann and Chas. A. McBeth.

Essay—By Dr. M. D. Mann, subject: "Management of Abortion." The paper appears complete in the September number of the BUFFALO MEDICAL JOURNAL.

Discussion—Dr. Cronyn thought the directions given hardly left room for discussion. He firmly believed in the early removal of the placenta, also favored ergot and quinine; recommended the tampon and related personal experiences.

Dr. Ring said accidental miscarriages were troublesome affairs; referred to the kite-tail tampon and endorsed the use of the water bag when available. He related a case where the only styptic at hand was alum, which was carried into the vagina and proved efficacious. He had since tried the pulverized alum in the vagina, followed by tampon, about a dozen times with the greatest satisfaction. He also related a case where placenta was retained for ten days when it was forcibly removed and found in excellent condition.

Dr. Hauenstein had been much interested and thought the paper fully covered the ground. He alluded to the different ideas among physicians as to the best means of controlling hemorrhage. He described tampon as used by himself, also the rubber ball, or colpeurynter, which may be dilated by air or water, which has been most satisfactory in his hands.

Dr. Rochester agreed heartily in all the recommendations. He said that Dr. Gilman taught that opium would sometimes produce abortion and the speaker's experience had led him to believe that this was sometimes the case. He thought the fluid ext. Hamamelis very valuable to prevent hemorrhage, also endorsed quinine as an ecbohic. Related case of a woman who had been delivered at seventh month, but placenta retained a full month; removal by the hand was impossible until dilatation by large sponge tent. The woman became pregnant again within a year.

Dr. Strong spoke in favor of the kite-tail tampon and supported Dr. Rochester as to the antiseptic property of quinine and its value in preventing suppuration.

Dr. Bartlett related a case where he had employed a lamp chimney as a substitute for the speculum in introducing tampon, the case being urgent and the proper instrument unobtainable.

Dr. Mann spoke against the antiseptic action of quinine and mentioned its action on certain fluids, white blood corpuscles, etc. The result, however, was dependent upon the presence of

a considerable quantity and that we could not get enough into the blood without killing the patient.

Dr. Cronyn said he did not mean the antiseptic action of quinine, but that together ergot and quinine act better than either alone.

Prevailing Diseases—Dr. Rochester reported that the last week had brought cholera infantum. He had had some severe cases terminating fatally in from two to five days, with peculiar head symptoms.

Dr. Bartlett mentioned diarrhœa and dysentery as being almost epidemic.

Dr. Cronyn had noticed the peculiar odor of sulphuretted hydrogen in the dejections.

Dr. Hauenstein had seen some scarlet fever, a good deal of cholera infantum and one severe case of cholera in an adult, presenting the characteristic symptoms of Asiatic cholera.

Dr. Ring had seen many cases of cholera infantum. He referred briefly to the usual treatment and said that where the mother's milk was deficient he thought well of condensed milk; also spoke highly of the milk supplied from Jewett's dairy farm.

Dr. Moody also endorsed Jewett's milk.

Voluntary Communications—Dr. Hartwig presented a case of strumous disease of the knee-joint, from which he had removed foreign bodies after free incision, as explained in a previous meeting, and asked what further could be done in the case.

Dr. Gay said, that his namesake, of London, first proposed the operation; that he had practiced it many times; had operated at the Alms House for the same trouble as in case described by Dr. Hartwig.

Dr. Mynter thought foreign growths should be removed from suppurating joints, but that joints should not be opened for the purpose of diagnosis.

Dr. Tremaine thought knees should not be opened, except in those cases which had been mentioned by Dr. Mynter. He had

seen a perforating gun-shot wound of patella from 45 calibre gun, penetrating to head of tibia, followed by complete recovery. But one or several cases of this kind did not give a warrant for operative interference with the joint.

Dr. Hartwig remarked that he did not open the joint for the purpose of diagnosis, but first used a trocar, then followed with the operation for the removal of the bodies in the joint.

Reports of Committee—The President called for a report from the committee appointed at a previous meeting "Upon charges preferred against certain members of the Association for non-payment of dues for more than five years." The report of the committee recommended that of physicians resident in the city the names of four should be dropped from the list, and that the names of seven others, not now residing in the city, but who have omitted to send in their resignations, should be erased from the list of members.

After some discussion the recommendation of the committee was adopted.

Adjourned.

C. M. DANIELS, *Secretary*.

Selections.

CARDIAC SYMPTOMS OF CHOREA.

Dr. O. Sturges (*Brain*, July, 1881) summarizes the several factors of the heart symptoms thus: 1. In the course of the chorea of childhood the heart's action is apt to become irregular or uneven, and its first sound to be followed by apex-murmur, which is variable in pitch, influenced by posture, seldom audible in the axilla or at the angle of the scapula, and which disappears along with or shortly after the chorea, the heart and the circulation suffering no injury. 2. This liability on the part of the heart to what, from its signs, would seem to be a functional

disturbance, is independent of the violence or method of the chorea, but dependent upon the age of the patient, the younger children being most, and the elder least, liable; while beyond childhood there is little, if any, liability of the kind. 3. These heart signs of chorea—acute rheumatism being excluded—give rise, as a general rule, to no symptoms whatever affecting the health or comfort of the child. They make no apparent difference to the prospects of recovery, or to the structural integrity of the heart. Nevertheless, choreic children having this murmur and happening to die either with, or shortly after recovery from the chorea, very commonly exhibit a beading of recent lymph on the mitral valves. Such, he says, are the chief statements which statistics seem to warrant. To these he adds another, which, so far as he knows, has never been statistically recorded, but which no one will gainsay. It is, indeed, the most constant of all the heart symptoms of chorea, and met with at a later age than the rest. He refers to the acceleration of the heart and pulse.—*Amer. Jour. Med. Sci.*, Jan., 1882.

A NEW WAY TO DETECT STONE IN THE BLADDER.

Dr. James McKenzie Davidson, in the *Lancet*, calls attention to the "auditory method" of detecting vesical calculi. This simple method consists in connecting the end of the catheter with the ear of the surgeon by means of an India rubber tube. A light rubber tube two feet long and with a bore three-eighths of an inch in diameter was employed. One end was slipped over the handle of the sound and the other end held close to the ear. No difficulty was experienced in exploring the bladder, because the tube was so flexible, and it only required a little care to prevent the interference of extraneous noises, as rubbing against the coat, etc. A small calculus was introduced into the bladder (for experiment) and when nothing could be heard or felt by the sound alone, yet by means of the tube the calculus was distinctly and unmistakably heard. With a large

stone the click was greatly intensified when heard through the tube. A small piece of coal was crushed to rough powder and introduced into the bladder. The ordinary method revealed nothing, but through the tube a rough, grating sound was distinctly heard.

This method of exploration of the bladder may yield important practical results. Not only may (1) a small calculus be detected which would be otherwise overlooked, but (2) it may be that practice will enable the operator to distinguish the size and character of the surface of a calculus readily; and (3) it also appears likely that a somewhat similar ear connection with a lithotrite will enable the operator to find and secure small fragments more rapidly, and so crush them.

ALBUMINURIA AS A SYMPTOM OF EPILEPTIC ATTACKS.

Kleudgen, *Arch. f. Psych.*, etc., xi, p. 478. The author concludes from an examination of 57 cases: (1) That by a certain degree of concentration traces of albumen may be detected in all urine. (2) That without increase in the specific gravity the amount of albumen may increase without our being forced to conclude that renal disease is present. (3) That post-epileptic urine has nothing characteristic about it. (4) Rarely, the post-epileptic urine is richer in albumen than before, and then only to a slight degree, and often dependent on the presence of seminal fluid. The specific gravity may be high or low after the attack; the reaction may be of an alkaline nature, or acid. Sugar was not found.—*Centralbl. f. Med. Wis.*, Oct. 22, 1881.

IODOFORM IN DIABETES.

The last drug introduced into the treatment of diabetes mellitus is iodoform, which Prof. Moleschott, in a recent communication to the Academy of Medicine at Rome, states he has found to be very beneficial in five cases of that disease. The quantity of sugar excreted rapidly diminished in all cases so treated.

Small doses are sometimes productive of good results, but as much as forty and fifty centigrammes may be administered daily with impunity. The Professor employs cumarin—the odoriferous principle of the Tonquin bean—to overcome the unpleasant smell of iodoform. He prescribes: iodoform, 1.0, extract of lettuce, 1.0, cumarin, 0.1; to be made into twenty pills with powdered gum arabic, and to proceed from one pill twice to two pills four times in the twenty-four hours.—*Lancet*.

TO COVER THE ODOR OF IODOFORM.

Dr. Putz, of Graefrath, has tried all the recommended means for covering the odor of iodoform, and confines himself now exclusively to oil of mirbane or nitrobenzol, all the others having failed in his hands. Six drops of nitrobenzol are used for every gram of iodoform.—*Pharm. Zeit.; New Remedies*.

Editorial.

DISCUSSION ON THE NEW CODE.

A considerable portion of our space in this number of the JOURNAL is devoted to an interesting discussion, which took place in The Buffalo Medical Club, on the Code of Ethics, recently adopted by the New York State Medical Society, a subject which has called forth in professional circles adverse as well as favorable criticism. We present both the affirmative and the negative arguments, with a view to offer both sides of this question, affording the reader the privilege of judging of the force of the respective arguments, and of drawing his own conclusions. The profession view this subject from widely different standpoints, according to individual bias. The prejudice of the past, if we may judge from the recent action of so able and respectable a body as the State Medical Society, is rapidly giving way to a more liberal professional sentiment. Whether this change is due to the force of public opinion, or to the approach of the various "pathies" towards a common therapeutical law, or

to the greater tolerance of differences of opinion on vital principles, are suggestive questions. At any rate, it must be conceded that there is a deep significance in the action itself of the State Society. It betokens a widespread sentiment among our ablest medical men, that we should estimate professional skill and erudition and character in our consultations, rather than individual opinions of the action of curative agents, or the size of the doses which others may desire to administer. This idea is truly American and is the direct offshoot of our institutions.

The subject is of vast importance, and is justly creating discussion not only in this State, but throughout the land. If we may judge from the action of the American Medical Association, the general sentiment of the profession is adverse to the acceptance of this Code. The past teaches just such antagonisms to all great professional movements; and whether this initial step be the precursor of the breaking down of all barriers to professional intercourse, or to a general acceptance of uniformity of ideas in therapeutics, the future will decide. In the meantime the profession can well afford to look upon the new code with the spirit of forbearance at least, for if it subserves the great interests of humanity which it is the prerogative of medicine to foster and advance, the purpose of its enactment will be fully appreciated in the near future, and the State Society receive the endorsement of the profession. On the other hand, if its adoption was brought about through motives of *expediency* rather than of *principle*, the effort will prove one of those foolish attempts to reform the code without any reason therefor, and without any practical benefit to the profession or the public.

EDITORIAL NOTES.

OUR printer inadvertently failed to credit the very practical article on the "Treatment of Acne" in the selection of the August number to the *St. Louis Medical and Surgical Journal*, from which it was taken. Our apologies are due to the editor of the above journal for this omission.

THE *London Lancet*, after noticing the recent action of the American Medical Association in refusing admission to the delegates of the Medical Society of the State of New York, says: "When will the British Medical Association take a similar course and refuse membership to those who express their willingness to consult with homœopathic and other irregular, though qualified, practitioners?"

At the Jubilee meeting of the British Medical Association "The Report of the Council" states, that, as far as possible, the Association had closed the door of entrance to a professing homœopath. They considered it unadvisable to take action for the expulsion of any who had perverted to homœopathy after admission, because 1st, Such a course would be beneath the dignity of the members of a great and avowedly liberal profession, and 2d, Because it would confer an amount of notoriety which was very undesirable upon those which were expelled.

Reviews.

The Change of Life in Health and Disease: a Clinical Treatise on the Diseases of the Ganglionic Nervous System, incidental to Women at the Decline of Life. By EDWARD JOHN TILT, M. D., Past President of the Obstetrical Society of London. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut street. Price 75 cents. 1882.

Whatever issues from the pen of Dr. Tilt, in the specialty which he has done so much to develop, is worthy of the consideration of the profession. The field which this work aims to investigate is fertile in the development of pathological conditions, which prove perplexing in their management to the physician and often fatal in their results. Dr. Tilt throws a bomb into the camp of American Surgeons in protesting against the too frequent use of the knife in the treatment of uterine affections, taking the more conservative position peculiar to the English on questions of this kind. This contribution to the literature of diseases peculiar to the climacteric is worthy of its author, and

is valuable in the clear light it sheds upon the physiological and pathological changes, peculiar to the change and the decline of life.

What to Do in Cases of Poisoning. By WILLIAM MURRELL, M. D., M. R., C. P., Lecturer on Materia Medica and Therapeutics at the Westminster Hospital, etc. Second edition. Detroit, Mich.: Geo. S. Davis, Medical Publisher. 1882.

The object of this little work is to give plain straightforward directions for the treatment of the commonest cases of poisoning. It is an excellent little book and though so small as to be easily carried in vest pockets, it gives the recognized antidotes and directions for the treatment of every case of poisoning which the physician is likely to meet with in active practice.

An Index of Comparative Therapeutics; with Tables of differential Diagnosis, a pronouncing Dose List in the Genitive Case, a list of Medicines used in Homœopathic Practice and Memoranda concerning Thermometry, Incompatibility of Medicines, Ethics, Obstetrics, Urinary Examinations, etc., etc. By SAMUEL O. L. POTTER, A. M., M. D., President of the Milwaukee Academy of Medicine. Second edition. Chicago: Gross & Delbridge. 1882.

When the first edition of this work appeared, we commented upon its good points and pointed out that it was at least a valuable index to many great works upon therapeutics. A second edition after a few months shows that there are not a few who appreciate its merits.

A Practical Treatise on Diseases of the Skin. By LOUIS A. DUHRING, M. D. Third edition. Revised and enlarged. Philadelphia: J. B. Lippincott & Co. 1882.

In a previous number of the JOURNAL the second edition of Dr. Duhring's work was favorably reviewed. That in this brief period the third edition should be called for, is a most flattering expression of appreciation by the profession of the merits and value of this book. The present edition has been greatly im-

proved. The chapter on the anatomy and physiology of the skin has been re-written, recent studies in microscopic anatomy demanding the change; while additions in the way of cases illustrating rare and interesting forms of cutaneous diseases, with new and important observations—personal experiences and therapeutics—make the present edition the most valuable addition to the literature of dermatology which has come to our notice. Dr. Duhring has placed the profession under obligations for his labors in presenting a complete series of plates, illustrating the varieties of skin diseases. These plates, with this work, form the most complete guide to the study of dermatology yet offered by any American author. We recommend the work as the most complete and valuable treatise in the department of dermatology, and a medical library can hardly be considered furnished without it.

Atlas of Human Anatomy; containing 197 large plates. Arranged according to Drs. Oesterreicher and Erdl from their original designs from nature and many other of the greatest anatomists of modern times. With full and explanatory texts by J. A. JEANCON, M. D. Complete in 49 parts, at 75 cents each. Cincinnati, Ohio: A. E. Wilde & Co., Publishers.

It is with no little pleasure that we announce the completion of this great work. The promises of the publishers have been more than fulfilled. No expense has been spared in the production of the plates, many of which are almost life-size. Considering the immense expense of publishing such a work, the price is exceedingly low and within the reach of every practitioner. To those who can not have the advantage of easy access to the dissecting room it is of the greatest value, not only as an aid in keeping up his knowledge of anatomy but as a book of reference.

The Atlas is accompanied with a volume of nearly 200 pages of explanatory text, so arranged as to make the description of any plate easy of access. The work is deserving of all praise, and we hope the enterprise of the publishers will meet a due reward.

Atlas of Gynecology and Obstetrics. Edited by Dr. A. MARTIN, Prof. of Gynecology at the University of Berlin. Containing 475 black and 37 colored illustrations from the original designs of Beigel, Virchow, Hyrtl, Kilian, Naegele, Schroeder, Rokitansky, Spiegelberg and 83 others. Supplemented by numerous illustrations from J. P. Maygrier's *Nouvelles Demonstrations D'Accouchements*. Cincinnati, Ohio: A. E. Wilde & Co., Publishers. *

The engraving and typographical work is excellent. The work is published in 15 numbers quarto. The price is one dollar a number or fifteen dollars for the complete work. For the present we feel that we cannot do better than to give to our readers the following preface:

"In placing before the American profession the 'Atlas of Gynæcology and Obstetrics,' it is our desire to give the Students and Physicians a thoroughly practical and demonstrative work on those two important and kindred branches of medical science. While there is no lack of text-books on these subjects, the ordinary octavo size in which these books are printed makes it impossible that they should contain large plates—indeed, many of the cuts are so small as to be obscure—hence, the 'Atlas of Gynæcology and Obstetrics' comes into the field as a Hand-book, adapted to and in many respects supplementary to the text-books and treatises already in use.

"Martin's 'Hand-Atlas der Gynæcologie und Geburtshülfe,' a German work, whose large sale in Europe attests its value, if that were not assured, by the illustrious name of its compiler, and Maygrier's 'Nouvelles Demonstrations D'Accouchements,' an Atlas of Midwifery, very popular in France, constitute with some additional plates this Atlas. We believe this is the only series of plates before English readers fully illustrating diseases of woman and obstetrics. Many of the plates are colored, which adds much to their value, since in anatomy it enables one at a glance to distinguish the various structures, and in pathological conditions it gives the best idea which can be had of morbid appearances, outside of the post-mortem room.

"The text to the gynæcological portion is a translation of that contained in Martin's work; the text to the plates on obstetrics has been written for this Atlas, and while no claim is made to originality, the writer has endeavored by diligent study of the modern authorities to give the main points treated in the plates correctly, and to make the text concise, yet clear. The explanatory text is placed opposite the plates—an advantage which every reader will appreciate.

"A glance at the Atlas will show its completeness. In the division relating to gynæcology, the normal anatomy of the uterus, gross and microscopical; the relations of the uterus to surrounding organs; the diseases affecting the genito-urinary apparatus in the female; flexion and version of the uterus; malformations and tumors of the uterus and vagina, are among the principal subjects treated. In the obstetrical division, the signs of pregnancy, the course of pregnancy, the mechanism of normal labor, impediments to delivery, the various presentations, normal and abnormal, and operative obstetrics, are among the subjects considered. Every teacher of obstetrics will recognize at once the usefulness of the plates in clearing up a study which at best is difficult and complicated to the student.

"The very large sale which the 'Atlas of Gynæcology and Obstetrics' has had in its issue in parts, and the flattering notices of the medical press, make the publishers confident that now, when after much labor and great outlay, the work is complete, it will find its proper place as a help and guide in the study of these branches in which America has always held such a leading place."

BOOKS RECEIVED.

Transactions of the Medical and Chirurgical Faculty of the State of Maryland. Eighty-fourth annual session held at Baltimore, Md., April, 1882.

A Study of Rupture of the Bladder, with some experiments bearing upon the closure of the vesical wound. By ALEX. W. STEIN, M. D., of New York. Reprint. New York: Gustav E. Stechert, 766 Broadway. 1882.

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Original Communications.

HISTOLOGY OF THE NERVES; A CONTRIBUTION OF THE LATEST
RESEARCHES.*

BY FRANK DUDLEY BEANE, A. M., M. D., of New York City,
Ex-Fellow of the Mass. Med. Society; Ex-Member of the New York County Med. Society, etc.

The recently-issued work of M. Ranvier contains a mine of wealth for those whose knowledge of the French language, and leisure, permits them to explore the deeply-hidden and very interesting facts relative to the histology of the nerves.

To lay before the mass of the profession the salient and *essential* data of the latest and most reliable researches in an English dress is the object of the translator, whose belief in their value to the profession at large is his excuse for the publication of this paper.

Cerebro-Spinal Nerves.—The spinal and cerebral nerves proper are called, on account of their special constitution, *myelomic*. They are white, more or less opaque, emitting and reflecting light like watered silk. As Fontana† first pointed out, this pearly appearance is due to simple folds from which the light is

*Translated, abridged and arranged from "Leçons sur l'Histologie du Système Nerveux," par L. Ranvier, Professeur de l'Anatomie Générale au Collège de France. Paris, 1878,

†"Traité du Venin de la Vipère," t. II, p. 202.

reflected. If the nerve be stretched, these folds are seen to disappear. These folds are due to a zigzag arrangement of the nerve-tubes within the nerve when its sheath, by reason of its elasticity, has folded upon itself.

If a segment be removed from a nerve of a living animal (frog, rabbit, etc.) and allowed to rest in distilled water upon a glass slide, we see, after a certain time, masses of matter exude from the cut extremities, which possess the form of clews of transparent filaments. The latter gradually swell, their contour becomes less clear, they seem to dissolve one into the other, and, after half or one hour, the clews become divided into ball-like masses of varied form, double contour, highly refracting border, and concentric striæ, the latter somewhat reminding one of the original filaments; these masses free themselves from one another and float away to another portion of the microscopic field. They possess forms intermediate of the cylindrical and spherical. This medullary substance of nerve-tubes is called *myelin*, whence the designation of this kind of nerves.

If the nerve segment be undisturbed within the water, this process of oozing of the myelin would continue until a more or less extensive portion of the segment were completely freed of its medulla, leaving behind what, at first, appears to be simply a connective-tissue envelope. The *connective-tissue sheaths* of large nerve-trunks are three in number, from without inward:

- a. The Perifascicular.
- b. The Laminated.
- c. The Intrafascicular.

A segment taken from a dog's sciatic nerve (which is composed of several fasciculi), and properly prepared* gives a specimen which beautifully shows the former two. The field shows the whole nerve as surrounded by an envelope of diffuse connective-tissue, which also dips down and binds the various fasciculi together; this is the nerve's *perifasciculi sheath*.

* Technical details are necessarily omitted from this paper; the reader is referred to the original, where the minutest directions and best methods shall be found.—TRANSLATOR.

Internal to the latter, and surrounding each fasciculus, another envelope is seen, called the *laminated sheath*. Within, and seemingly as offshoots from this sheath, appear delicate layers of connective-tissue which join each other here and there, forming, by their interspaces, compartments within the laminated sheath. These layers form what is called the *intrafascicular sheath*.

The compartments thereby formed, as well as the perifascicular sheath, contain blood vessels.

Let us examine these various envelopes more in detail.

Perifascicular Sheath.—As mentioned above, this envelope surrounds the whole nerve as well as, by its prolongations, solders the different fasciculi together. It is composed of diffuse connective-tissue, otherwise called cellular or areolar tissue. It is constituted by connective filaments, elastic fibres, flat cells, fat cells, blood vessels and lymphatics. The connective fibres, unlike those found elsewhere, do not intercross in all directions, but pursue a longitudinal course. The elastic-tissue networks also present their elongated meshes in the direction of the nerve's axis. The fat cells are disposed in small elongated groups, the long diameter of which is parallel to the direction of the nerve-cord. The more internal portion of this sheath (i. e. nearest the nerve-fasciculi) assumes the form of laminae, the filaments of which are, however, thick, large, and independent of each other. A properly-prepared section shows their arrangement in the form of the leaves of an open book. These laminae, instead of being composed of a trellis of delicate fibres like the laminated sheath, are, compared to the latter, only coarse mats. Indeed, it is impossible to draw a perfectly defined line between the connective-tissue of the perifascicular sheath and that constituting the laminated sheath proper. The distinction is arbitrarily based upon the fact that the filaments of the latter sheath are the more delicate. It is through the perifascicular sheath that the nerve is bound to the surrounding tissues.

Laminated Sheath.—This envelope, lying internal to the former, completely surrounds each fasciculus of nerve-tubes.

A property prepared transverse section would show this sheath as composed of superimposed concentric layers.

If another section be prepared with silver nitrate, this sheath is seen to be constituted by a series of laminae, each separated from the other by black, granular, often irregular lines, due to the staining material. The number of the laminae depends upon the size of the nerve under examination; in this sheath of a single fasciculus, from a dog's sciatic nerve, ten to fourteen may be counted. In the rabbit they are fewer, more delicate, and so extensible that the injection separates them very fully.

The structure of these laminae is made up of a *stroma* and *endothelial cells*, applied to the surface of the stroma. If a very delicate shred of this sheath be stripped off—so as to isolate, as nearly as possible, a single lamina—and one or two drops of Boehmer's solution of hæmatoxylin be allowed to fall upon it, if then it be washed in distilled water, and examined in glycerine, we shall see :

1. A slightly tinted (bluish) stroma of very delicate filaments, which decussate in such a manner as to form a network with irregular interstices.

2. Very deeply tinted nuclei, irregularly oval, variable in size, with a distinct nucleolus. These are in immediate contact with the stroma.

3. A homogeneous, transparent, delicate, slightly tinted layer, which unites the nuclei to each other.

The latter two form the *endothelial layer* of the laminated sheath.

The layer, which connects the cells, is seen to present very delicate striæ which intersect each other at right-angles, and are less highly tinted than the nuclei proper. This layer is also thinner than the nuclei.

In man, the nuclei are so joined together (using the choroid membrane) that it is impossible to clearly distinguish the above-described characters; but if the choroid of a dog be used, we see them beautifully marked. Each face of the laminae, which

compose this sheath, is carpeted (so to speak) by an endothelial layer. This fact can be well demonstrated in a specially-prepared Pacinian corpuscle; at times, by chance, we can see this arrangement in the laminated sheath of a nerve-fasciculus when properly prepared.

Between the different layers of this sheath are interspaces of irregular shape; these inter-lamellar interstices should be regarded as *serous* interspaces.

As M. Cruveilhier pointed out, in 1835, the laminated sheath should be considered a serous membrane, since, like all serous membranes, it is covered by endothelium. Besides the above constituents, this sheath contains, on the surface of each lamina, a species of network of delicate elastic fibres. A properly-prepared specimen shows a species of plates with irregular contour, a central foramen, and the plates giving off fibrillary prolongations from the periphery. These prolongations appear like a series of beads strung together as in a necklace. Similar grains or beads are sometimes irregularly distributed around the edge of the plate or its vicinity.

These plates, prolongations and grains are homologous in structure, powerfully refract light, are insoluble in acids and weak alkaline solutions, and are colored yellow by picric acid. The elastic tissue of this sheath appears in no other form than that just described, and it is extra—or pericellular, i. e., developed external to the endothelial layer.

In the external laminæ of this sheath, round or oval openings are seen. They may appear as single foramina, or as one, two, three or more openings, lying side by side, with simple partitions between them.

The laminated sheath is pierced by arteries and veins of such size as to be visible to the naked eye, but no blood vessels are distributed upon or within it.

Intrafascicular Sheath.—Between the nerve-tubes of each fasciculus the laminated sheath sends, from its most internal layers, partitions, which, dividing and subdividing, becoming thinner

and thinner, divide the fasciculus into a great number of compartments. These partitions are the *intrafascicular lamina*. Finally, around each nerve-tube of the fasciculus, a very delicate sheath of connective-tissue is found, and this membrane is called the *intrafascicular connective-tissue proper*. Whether this latter takes its origin from the former or from the internal layers of the laminated sheath, or whether it originates from neither, is not a settled question.

The intrafascicular connective-tissue *proper* is composed of fibres and cells.

If a nerve-cord be disassociated, (i. e., nerve-tubes be separated from each other), after the action of acid osmic, we see that each nerve-tube is surrounded by a certain number of exceedingly delicate, slightly undulating fibrils, the direction of which is parallel to the nerve-tube. If another portion of this prepared cord be stained by hæmatoxylin or picro-carmin, we recognize cellular plates upon the surface of these fibrils. These cells are irregular in contour, and give off prolongations which do not join one cell to another, at least I have never seen them do so.

After detaching one of these cells, we find it does not possess a plane surface, but turns up its sides like a gutter-tile, thus preserving its normal shape around the nerve-tube. Some parts of its surface are thicker than others, its nuclei participating in this condition, which is due to depressions produced by the pressure of the neighboring connective-tissue fibres and of the nerve-tube itself.

The intrafascicular laminæ are supplied with blood vessels.

Henle's Sheath.—Descending the scale, following nerve-cords to a nerve of a single fasciculus, thence to a *funiculus* containing only two, three, or five individual nerve-tubes, we should find that this extremely small funiculus is surrounded by its own sheath, distinct from those already described.

This special sheath should be considered simply as the substitute for the laminated and intrafascicular sheaths, which are lost before the division of the fasciculus into these small funiculi.

This sheath, which also envelops nerves composed of even a single nerve-tube, is the *sheath of Henle*, named after its discoverer.*

A segment of a lizard's (preferable) or frog's muscular nerve at its peripheral termination, where it is composed of a single nerve-tube, placed under the microscope, shows it to be surrounded by an external membrane, beneath which are nuclei imbedded in a mass of protoplasm. The membrane is pliant, as evidenced by the folds which are produced by the manipulation. It is carpeted on its internal surface (to which they adhere) by the above-mentioned nuclei, and, here and there on its external surface, we see the flat cells of its connective-tissue investment. A third species of cells are seen to cover the nerve-tube itself, beneath and absolutely distinct from the sheath of Henle.

If now a rat's or mouse's thoracic nerve be prepared with silver nitrate we see, beneath the connective tissue which binds the nerve to the various external tissues, black lines which form large, irregular polygons by their intervals. These lines correspond to spaces between the polygons, which latter are endothelial cells; the inter-polygonal spaces are filled up by an extremely delicate layer of intercellular cement. By carefully observing the specimen, we should see that there is a double *réséau* of black lines which intercross each other, thus demonstrating there are two layers of endothelium which are closely applied to each other.

The membrane of Henle's sheath is composed of connective-tissue.

En résumé, Henle's sheath is constituted by:

1. A connective-tissue membrane.
2. Lined internally by a layer of endothelial cells.
3. Internal to and distinct from the latter are nucleated cells which lie upon the nerve-funiculus or nerve-tube.

Myelinic Nerve-Tubes.—Their structure presents a very interesting study to the histologist.

* "Anatomie des Menschen;" edition of 1843.

If a single nerve-tube be isolated, stripped of its sheath of Henle, and a segment be removed, placed upon a slide in a drop of distilled water, and examined under the microscope, the myelin is seen to comport itself in the same manner as described on page 97. The connective-tissue membrane seen at the end which has collapsed is the *true* envelope of the nerve-tube, first described by Schwann,* and called after him, Schwann's sheath.

By attentive observation one sees in the centre of Schwann's sheath a band, cylindrical in form, and refracting light less powerfully than the myelin (which has just exuded); this cylindrical band is seen to extend a certain distance beyond the cut end of Schwann's sheath, and at that point is so pale and transparent as to be distinguished with difficulty.

This is the *axis-cylinder*, first discovered and described by Remak.†

Thus we see a myelinic nerve-tube is composed of the sheath of Schwann, the myelin and the axis-cylinder.

On changing the field one reaches a portion of the nerve-tube which has undergone no change in the relation of its structure. The double contour, due to the intact myelin, is seen. Tracing the tube further one encounters interruptions in the myelin, at more or less regular distances, in the form of transverse partitions, called *annular constrictions*. At the centre of the space between two constrictions the nerve-tube presents a nucleus, lying within a niche in the myelin and surrounded by a layer of protoplasm. As Sigmund Mayer‡ has pointed out, this protoplasm is not only granular but pigmented in the frog. In mammals it is simply granular, and but one nucleus is found in each inter-annular segment.

A properly-prepared nerve-tube should show the following details: At the annular constriction the nerve-tube terminates by a slight enlargement. This is due to a larger collection of

* "Microscopische Untersuchungen;" p. 174, 1839.

† Forriep's "Neue Notizen," No. 47, 1837.

‡ "Die Periphere Nerven zelle und das Sympathische Nervensystem;" Archiv, f. Psychiatrie, 1876, p. 361.

myelin at that point than is found throughout the shaft of the *interannular segment*. This collection of myelin is contained within a pocket, so to speak, formed by Schwann's sheath, thereby giving the former a convexity which rests within the concavity of the latter.

Between two of these convex enlargements—forming the extremity of two interannular segments, respectively—placed face to face, a biconcave meniscus is formed which, at first, appears perfectly transparent.

Attentive examination should discover the axis-cylinder traversing this space. The axis is crossed by a stria at the centre of the meniscus, or biconcave space, appearing the more brilliant as the objective-lens is raised from the slide.

At the extreme border of each convex enlargement of the myelin the concave fold or pocket of Schwann's sheath is seen.

A delicate nerve segment, treated by silver nitrate, shows the endothelial layer of Henle's sheath. Between the polygonal markings one sees, within this mass of nerve-tubes, a series of small Latin crosses, colored black. The longitudinal black bar is the axis-cylinder stained by the silver nitrate, whilst the transverse line corresponds to the annular constriction.

Attentive examination demonstrates, especially if the myelin have been rendered transparent by the action of glycerine, the alternating brown and black transverse striæ of the axis-cylinder, called *Frommann's lines*, after him who first described * them. These striæ are less marked, till final disappearance, the further from the constriction one examines.

Another silver nitrate preparation shows: Within the continuity of the annular segment, separated from the annular constriction, an enlargement which seems to be soldered to the axis-cylinder. It appears like two cones united base to base, through the axis of which the axis-cylinder passes. The surface formed by the union of the two cones is flattened. This body is called the *biconical enlargement*, is colored black, and on

* "Zur Silberfärbung der Axencylinder;" Virchow's Archiv., 1864, b. xxxi, p. 151.

either of which is a somewhat clearer line, beyond which are seen Frommann's lines. In the normal condition of the nerve-tube, this biconical enlargement corresponds in position to the annular constriction. In some preparations it is displaced, the axis-cylinder having become retracted within the nerve-tube. The fact that Frommann's lines diminish in size and clearness from the constriction as a centre when the condition of the nerve-tube is normal, whilst in some preparations the biconical enlargement is the centre, leads to the conclusion given above as to the normal position of the biconical enlargement.

In this same silver nitrate preparation a black ring is seen at the annular constriction. The existence of this black ring indicates, since axis-cylinder and biconical enlargement are displaced: first, that it is the sheath of Schwann which is thus colored at that point; second, the soldering together of two separate surfaces of that sheath, since it is known that whenever cellular elements (endothelial, epithelial, connective-tissue cells) are cemented together, treatment by silver nitrate demonstrates such union by black lines; third, that Schwann's sheath is formed of distinct segments, soldered together at each annular constriction. Evidently, therefore, the biconical enlargement is not solidly united to Schwann's sheath, otherwise the displacement thereof with the axis-cylinder could not occur. Regarding the incomplete constrictions described by various histologists, I have never observed them in well-prepared specimens (in physiological extension, fixed by acid osmic, and disassociated with care), and believe them to be due to imperfect preparation.

If a nerve be hardened with acid osmic, and disassociated carelessly and with violence, fractures of the myelin often occur. At the point of fracture it is easy to recognize the axis-cylinder, denuded of myelin, in the centre of the tube, and to distinguish at the edges the double contour of Schwann's sheath.

In a nerve-tube which has been freshly removed from the body and properly prepared, one can see, if the sheath of Schwann remain intact, oblique niches or fissures in the myelin

of each interannular segment, called the *incisures of Schmidt*.* They are found at irregular intervals. The *cyindro-conical* limbs of myelin which they separate cover one another like slate-tiles upon the roof of a house. These limbs terminate by very acute angles, on the one hand, at the internal surface of Schwann's sheath, and, on the other, at the surface of the axis-cylinder, over which they form, for a certain distance, a very slender sheath, as it were. The segments of myelin limited by the incisures are of variable length, and their extremities assume three forms: 1. One end being conical, the other hollowed out as a conical cavity, for the reception of the cone of another segment. 2. Both ends conical. 3. Both ends conically concave. These are called, *cyindro-conical segments*. Sometimes incomplete incisures, i. e., those which do not extend to the axis-cylinder, are observed.

The relation of the interannular nucleus to these incisures, and the limbs which they separate, is not constant, being sometimes situated upon the cyindro-conical segment, at others, over an incisure.

In nerves disassociated in acid osmic and properly prepared with picro-carmine, a certain number of axes-cylinder become disengaged from their myelinic and Schwann's sheath, and float away, perfectly isolated. They are rose-tinted, sometimes possess a deeper tint. Attentive examination would demonstrate that they possess a very delicate *untinted* border, whilst their median portion, colored red, presents an obliquely-decussating striation.

Properly-prepared transverse sections of a nerve show: 1. That many axes-cylinder have changed from the cylindrical to a stellate form, due to an alteration in the myelin (which has formed *boules*, and compress the axes-cylinder) produced by the acid osmic solution. 2. That some axes-cylinder preserve their normal circular form, colored red. Between the rose-tinted axis-

*Schmidt, "On the Construction of the Dark or Double-Bordered Nerve-Fibre;" in the *Monthly Microscopical Journal*, May, 1874, p. 200, first drew attention to these niches.

cylinder and its myelinic sheath a clear, uncolored ring is seen surrounding the axis-cylinder. This uncolored ring corresponds to a sheath, first described by Maunther,* and named after him, *Maunther's sheath*.

All the special histological characters of myelinic nerve-tubes which have just been described may be observed in a *living* nerve-tube, without the aid of any reagent. A preparation of a living frog's lung, according to Holmgren's method, demonstrates that a myelinic nerve-tube:

1. Possesses a *double contour*. This enunciation is just contrary to that of classical authors, who have claimed that the double contour was due to a coagulation of the myelin after section or death.

2. Possesses the same morphological divisions as have been described above.

Morphological Considerations.—We have seen that Schwann's sheath is not continuous, but forms segments which are soldered to each other.

We also know that the myelin is interrupted at the annular constrictions, where it is held by the pockets formed by Schwann's sheath.

But the axis-cylinder is *continuous* throughout the length of the nerve-tube; presents no interruption from one end to the other. The proof hereof is found in the fact:

1. That non-myelinic nerve-tubes exist which each possess an axis-cylinder, and in which, by the aid of such reagents as have already been employed for myelinic nerve-tubes, nothing comparable to annular constrictions can be found; there are no distinct segments.

2. That myelinic nerve-tubes which have been deprived of their medulla (reduced to their Schwann's sheath and axis-cylinder) show no traces of segmentation.

*“ Beitræge zur Kennt. der Morpholog. Elemente des Nervensystems;” Academy of Sciences of Vienna, Vol. xxxix.

3. That the treatment of myelinic nerve-fibres with a solution of caustic potassa (40: 60) demonstrates there is no soldering of the axis-cylinder.

Each interannular segment may morphologically be compared to an adipose cell, the Schwann's sheath corresponding to the cell-membrane, the interannular nucleus to the cell-nucleus (each being surrounded by a protoplasmic layer), and the myelin to the fatty matter of the cell.

The axis-cylinder is not a component of a single interannular segment, but is a *distinct entity* within the nerve-tube.

The protoplasmic layer is not limited to the vicinity of the interannular nucleus, but, throughout each segment, lines Schwann's sheath; at the extremity of the latter it is reflected upon the axis-cylinder, which it surrounds. At the point of reflection the protoplasmic layer of one segment is set back to back with that of the neighboring segment, whence is formed the *biconical enlargement*. I would fain believe that these two layers, which are set back to back, are united by a cementing substance similar to that found between certain cells devoid of membrane, for example, between the cardiac muscular cells.

The incisures of Schmidt arise from the development of the myelin in several cylindro-conical segments, whereby prolongations from the superficial to the deep protoplasmic layers are preserved instead of forming a single mass of myelin within each interannular segment.

Blood Vessels and Lymphatics.—Properly injected and prepared specimens demonstrate the existence of arteries and veins within the *perifascicular* sheath, and of smaller arteries and veins and capillaries within the *intrafascicular* sheath. In the former the blood vessels form a network with longitudinal meshes, which appears similar to that found in muscles, and possessing, like the latter, greatly elongated meshes, and their longitudinal primary branches are regularly intersected by transverse or oblique branches. The *laminated sheath* possesses no other vessels than those penetrating it on their way to the

intrafascicular sheath. Within the latter, and beneath a network of larger blood vessels (such as just described for the perifascicular sheath, only smaller), a capillary network, with elongated meshes, may be seen. These capillaries terminate by loops. From the summit of the convexity of each loop shoots a capillary which, further on, forms another loop, and soon indefinitely. At other points the offshooting capillary takes its origin at the summit of the loop which has been formed by the vessel taking a return course and forming its loop in an inverse direction. Again, a branch may pursue its course a certain distance, anastomosing with any other vessel, and rejoin the capillary from which it took its origin. This arrangement in forked series is very characteristic, and the *tout ensemble* may be called the *chain-like* capillary system.

The structure of the capillaries of nerves is the same as of capillaries in general.

The arteries and veins of the intrafascicular sheath are separated from the nerve-tubes by the lamina of this sheath. The capillaries are only separated from the nerve-tubes by the intrafascicular tissue proper (adults). In young animals their walls are, here and there, in direct contact with Schwann's sheath.

The Nutritive Plasma.—Each nerve-tube is constantly bathed in a nutritive plasma, yielded by the blood vessels which surround it, and is contained in the interstitial space formed by the laminated sheath on the one hand, and, on the other, by the nerve-tubes (surrounded by their Schwann's sheath, blood vessels and connective-tissue).

This nutritive plasma gains the axis-cylinder principally through the interannular constrictions, since the myelin does not allow the easy penetration of liquids.

The interannular constrictions are, then, the colloid channels through which nutritive materials are conveyed to the axis-cylinder.

Rôle of the Different Parts.—Schwann's sheath evidently serves to protect and maintain the myelin in place.

The myelin plays the part of protector to the axis-cylinder, preserving it from compression. In all probability it acts as an insulator to the latter.

The annular constrictions act the physiological *rôle* of preventing the displacements of the myelin, which otherwise would certainly occur when placed vertically.

As we have already seen, they are the channels through which nutrition is supplied to the axis-cylinder.

The incisures of Schmidt are undoubtedly concerned in preventing displacement of the myelin.

The axis-cylinder is the medium through which the nervous influence is conducted.

Sympathetic Nerves, or Remak's Fibres.—Remak* announced, in 1838, that he had found fibres in the sympathetic nervous system which should be considered as nerve-fibres devoid of myelin.

To-day histologists, with scarcely any exceptions, are convinced of the existence of such fibres.

Remak's fibres are particularly found in great abundance in the nerves of the system of organic life, but they do not, however, exclusively or specially belong to that system.

They are found in all mixed nerves in numbers varying according to the species of animal and the nerves under observation.

They do not exist in the special nerves, for example, the optic. The olfactory nerve contains nerve-fibres devoid of myelin, but these latter are wholly special, and should be classified and given a special description under the head of the terminations of nerves in the organs of special sense.

It is only necessary to know where Remak's nerve-fibres are to be found: our description shall be made by those found in mixed nerves.

Nerves which contain many of these fibres possess a gray or gelatinous appearance. In a state of relaxation they do not pre-

* "Observationes Anatomica et Microscopicæ de Systematis Nervosi Structura;" Berlin, 1838.

sent as marked a pearly aspect as other nerves. This modified appearance is due, in these as well as in the myelinic nerves, to zigzags which the fibres form in the interior of the nerves. Microscopic examination of a nerve taken from the spleen and disassociated in water shows that the fibres composing the nerve are not arranged like myelinic nerve-tubes, to wit: like javelins in a quiver, but ramify, anastomose, and form a network, the branches of which approach one another, the interspaces of which are unequal; the *résseau* offers more resistance to teasing in one direction than in another. The meshes of the network are quite irregular, very narrow and elongated, and always have their long diameter parallel to the axis of the nerve.

The interspaces are of very unequal thickness; sometimes they are extremely delicate, at others they have the diameter of a medium-sized myelinic nerve; they also present intermediary dimensions.

Upon these interspaces nuclei are to be seen. They are generally presented in profile, and then seem simply to be applied to the surface of the interspaces. Sometimes they are seen in the centre of the interspace and in full view. At other times, too, they seem to occupy the interior of the interspace in profile: this would seem to show they are placed in the interstice of the two united fibres constituting it. Their disposition is not regular, and the interval between them is variable.

If a nerve, largely containing Remak's fibres, be submitted to the action of acid osmic and disassociated, the first fact which attracts our attention is that Remak's fibres remain uncolored whilst the myelinic nerve-tubes, even of the smallest diameter, are colored black. We may, therefore, conclude that Remak's fibres contain no myelin, or, at least, not enough to be acted upon by the reagent. Acid picric specimens, stained with picro-carmine, Remak's fibres show indistinct, irregular, granular, longitudinal striation of those fibres.

If a dog's pneumogastric be acted upon and disassociated in acid osmic, and then submitted to the action of picro-carmine,

we first notice that Remak's fibres possess a well-marked longitudinal striation, of such a character that the fibres seem to be formed by a series of juxtaposed small filaments.

The nuclei (with their nucleoli) and their surrounding protoplasm are perfectly clear. This preparation demonstrates that the nuclei are always applied to the surface of the fibres; when they appear to be in their interior it is because a nucleus is situated at points where two Remak's fibres are about to be united or separated, and seems to be situated in the interior of this interspace, when really it belongs to one of the fibres and is applied to its surface.

Finally, this same specimen demonstrates that Remak's fibres are not connective-tissue fibres, since the picro-carmin has feebly colored the former whilst the latter remains absolutely uncolored. If red aniline be used, all doubts are at once dissipated by the deep red color of the former and the absence of color in the latter.

Although I have made a great number of specimens, very recently, too, with silver nitrate, I have never seen any indication of the soldering of two cellular elements, or any transverse striæ in Remak's fibres. I, nevertheless, do not consider the question as definitely settled. Perhaps the organic salts of silver may give different results. I should add, I have used silver lactate with negative results.

In specimens, prepared after the ammonia bichromate method and stained by picro-carmin, we note that, aside from the characters above described, each large Remak's fibre is composed of several fibres of very small size, either soldered together or separated over a certain distance. In each elementary fibre a large number of round or oval vacuoles are to be seen; they are uncolored and characterized, like all vacuoles, by less refringence than that of the medium in which they are produced. They are formed in the interior, even, of fibres which have been enlarged at their site, whilst elsewhere they are delicate and have thus become moniliform.

Transverse sections of a dog's pneumogastric or sciatic nerve, after treatment with acid chromic and picro-carminic, show, within the laminated sheath and between the myelinic nerve-tubes, very small, red, granular, irregular islets, which correspond to the fibres of Remak. There is also one elongated islet, situated immediately below the nerve's sheath, and distinct from the rest; this represents the section of the sympathetic nerve, which, as we know, is intimately united to the vagus. In these red-stained islets we are able to distinguish, by the aid of high powers, a series of very fine circles, pressed closely together. These circles represent the transverse section of the fibrillæ constituting the fibres of Remak.

This confirms our observation of their fibrillary structure when we examined them lengthwise after having disassociated them in acid osmic.

These are all the positive facts which we have acquired upon the constitution of Remak's fibres. But there are certain problems to be solved and hypotheses to be formulated upon this subject.

The first problem is in relation to their fibrillary structure. It is probable, indeed almost certain, that the fibrillæ we have recognized correspond to axes-cylinder. But this notion does not suffice, and, pushing our analysis further, we should ask whether the juxtaposed axes-cylinder are absolutely uncovered or surrounded by an envelope. I know no method which can give any exact results upon this subject; the elements in question are so delicate, it is difficult to pronounce definitely, consequently I must lay this question aside without any reply until I speak of the morphological constitution of Remak's fibres. Second question: Are the fibrillæ placed side by side, like arrows in a quiver, or are they united by some cementing substance? This question is confounded with another, in relation to the nuclei and protoplasm.

It has been impossible for us to distinguish above the nuclei any contour which corresponds to a membrane like that of

Schwann. It might be claimed that such a membrane is so extremely delicate, possessed a refringence so close approaching the medium in which it is situated, as to absolutely escape detection. I shall nevertheless assert that, *a priori*, I do not believe so. In fact, if it existed, this membrane would be the envelope of a cell, and if Remak's fibres were surrounded by cellular segments lined by membranes, analogous to the inter-annular segments of myelinic nerves, silver nitrate should disclose the soldering by black lines. But it does not. We are right in concluding that Remak's fibres do not possess any properly-called membrane.

This absence of all traces of soldering authorizes us to add that the nuclei do not belong to so many distinct cells, and that we have to do here with a cellular mass with several nuclei, analogous to cells with multiple nuclei found in other tissues.

The last problem is : What is the extent of the protoplasmic layers around the nuclei ? Do they extend the whole length of the fibres like a coating of varnish, or, on the contrary, do they penetrate their interior ? Either because we do not possess lenses of sufficient power, or a good method, it is impossible to arrive at a decisive result. Nevertheless, let me say, that, in the best preparations, the small circles corresponding to the transverse section of the fibrillæ, the latter seem to be embedded in a cementing substance.

My theory is that Remak's fibres are constituted by elongated protoplasmic masses, their nuclei crowded to the periphery, and the fibrillæ of the nerve are lodged in the midst of the protoplasm.

Morphological and Physiological Considerations.—The peculiar differences between myelinic and Remak nerve-fibres, which have been above described, are sufficient to disprove the long-held opinion that the latter is nothing more or less than a myelinic nerve arrested in its development, remaining, indeed, in an embryonic state.

The fibres of Remak constitute a distinct system, especially designed for organic life. Nevertheless, they are not exclusively charged with the innervation of the viscera, since the nerves distributed thereto also possess a certain number of myelinic nerves. Probably the latter serve to connect the organs with the central nervous system, whilst Remak's fibres establish their relations with the sympathetic nervous system. I am not convinced, however, that all myelinic fibres originate from the cerebro-spinal axis, and I believe there may be nerve-fibres which are absolutely organic, arising from the sympathetic system to be distributed to the viscera, which possess myelin. I think these are found as follows: We very well understand that myelinic nerve-fibres, from the cerebro-spinal axis and found in nerves destined to the viscera, may so act upon the fibres of Remak, in the midst of which they are embedded, that a certain number of the latter gradually acquire the character of myelinic nerve-fibres. Such an influence is incontestible; I shall take occasion to cite examples *à propos* of the tissue of cicatrices. Furthermore, since the *invertebrata* possess only non-myelinic nerves, the nerves of the *vertebrata* are undoubtedly the result of a higher development; now, if a distinct organism of higher growth be provided with myelinic nerve-fibres, why should not an organic system overleap, in its turn, even this limit between the two orders of fibres, and, also, arrive at the point of possessing myelinic nerve-fibres?

Thus, it is plain, taking the standpoint from histology, we can no longer distinguish between nerves of organic and of animal life, since both orders contain, in varying proportions, myelinic and Remak's fibres. Indeed, according to the last considerations we have just mentioned, it is even possible that myelinic nerve-fibres are purely organic.

We, therefore, readily comprehend that Bichat's classification is no longer admissible by histologists. We should, consequently, abstain from all physiological classification of nerves and nerve-fibres, and substitute simply a morphological one, distinguishing the myelinic from the nerve-fibres of Remak.

ARSENICAL POISONING—THE "KLOSS CASE"—UNUSUAL
POST-MORTEM APPEARANCES.

By A. R. DAVIDSON, M. D.

It is well known that the striking changes produced by arsenic are generally confined to the stomach and bowels. Taylor, Woodman, Tidy, and other authorities, assert that their intensity is usually in proportion to the largeness of the dose and the length of time the patient lived after taking the poison. My own experience is that it depends far more upon the conditions existing at the time the poison is taken. If, for instance, a large dose is received during or after a full meal, or mingled with a considerable quantity of food, the chances are favorable to the patient, and if death occurs, after many hours, the characteristic appearances are not nearly so well marked as in those cases in which a comparatively small quantity has been taken on an empty stomach, even if death has taken place in a few hours—in one case where death occurred in two hours, the stomach was found highly inflamed. In these cases the intensity of the inflammation is so great, extending as it does to the duodenum and sometimes through the whole length of the intestines and invariably present in the rectum, that a post-mortem examination can not be made without awakening the suspicion of the presence of an irritant poison.

This condition, too, is persistent for a long time after death. Bodies exhumed six, twelve, and in one case nineteen months after death have shown the stomach well preserved and its mucous membrane retaining an inflammatory redness.

But, on the other hand, where the arsenic has been taken with food, it occasionally happens that death may occur from its effects, and neither the stomach nor intestines present an abnormal appearance. Evidence of poisoning upon post-mortem examination would be here entirely wanting. Such cases are, undoubtedly, very rare, but the possibility of their occurrence is not to be overlooked, as they teach the important fact in legal medicine that the non-existence of striking changes in the ali-

mentary canal after death is no proof that the party has not died from the effects of an irritant poison. It is for this reason that I report the following case :

August 24, 1882, several biscuits were placed in my hands by one of the coroners of Erie county for analysis. Upon examination they were found to contain a quantity of arsenic, equal to about sixteen grains, in each biscuit. A portion of a family, mother and three children, had partaken of the biscuit quite freely at their evening meal, and had all been violently sick with the well-known and characteristic symptoms due to the poison. After twelve hours one of the children, a boy of six years, died. Eight days after, the body was exhumed in my presence ; the stomach, kidneys and liver removed ; the rectum was opened and found to be free from all indications of inflammation.

The stomach contained a very little whitish fluid, and, upon inspection, the mucous membrane was found to be paler than normal and absolutely free from any semblance of inflammatory action. An analysis proved it to contain a mere trace of arsenic.

The liver and kidneys, treated by Fresenius and Von Babo's method, yielded a little more than half a grain of arsenious acid.

The explanation of these exceptional cases, and of the common ones of recovery after large quantities of poison have been taken with food, is doubtless that the food so envelops the poison that it is prevented from attaching itself to the mucous membrane, and when emesis occurs the arsenic may be entirely thrown off with the contents of the stomach. The amount absorbed before its emetic action is evoked is frequently insufficient to produce death. While a part of the poison is rapidly eliminated by the kidneys, another part seems to be temporarily deposited in the liver and thereby withdrawn from the circulation. From the observations of the late Dr. Geohegan, it appears that the deposit of arsenic in the liver rapidly increases up to about fifteen hours after the poison has been taken, when that organ may contain as much as two grains of arsenic ; if the person survives, it then very gradually diminishes in quantity, and entirely disappears in from fourteen to seventeen days.

Clinical Reports.

TWO CASES OF SIMPLE FRACTURE OF THE SKULL UNRECOGNIZED FOR DAYS—LATE APPEARANCE OF SYMPTOMS.

TREPHINING—RESULTS.

REPORTED BY J. H. PRYOR, M. D.,

Resident Physician Buffalo General Hospital.

C. S., æt. 23, S. Ireland, sailor, entered hospital May 25, 1881. Two hours before, he had fallen through a hole in a dry-dock to the floor beneath, a distance of seventeen feet, sustaining a colle's fracture, and a slight bruise over the right eye. No signs or symptoms of fractured skull. The colle's fracture was dressed and he was put in bed, complaining of nothing more than a slight headache. He was given his clothes after a day or two, and allowed to sit up. June 5th, he spoke of being dizzy at times. June 7th, the pupils were noticed to be of unequal size, one remaining persistently dilated. June 11th, he could not read because the printed words ran together and he saw everything in pairs; also, had a slight convergent strabismus, and was more stupid than before. Thinking it probable that a simple fracture had occurred, Dr. Gay, the visiting surgeon, cut down where the contusion had been, as evidence pointed toward that spot. Upon lifting the flap a star-shaped fracture was disclosed with depression. The skull was trephined and the depressed bone elevated. A large clot lay upon the dura mater, but it was not removed. Allowance for drainage was made. After three days he grew brighter and the pupils assumed their normal shape. July 19th, he was discharged, well. The healing of the wound was delayed because the pus infiltrated the tissues of the upper eyelid, causing a troublesome complication.

Case No. II.—M. B., æt. 23, S. Poland, entered hospital Aug. 16, 1882. Patient walked into the hospital unaided. A nurse assigned him a chair and he sat down with his hand pressed to

his forehead. When asked why he had come, he replied, because he had a headache; that he had fallen into an excavation where sewer pipes were being laid; that for a time he was covered with earth which had become detached from the sides, and he thought that something had struck upon his head. A careful examination of the scalp was made and naught but a slight abrasion over the occipital region was noticed. I pressed upon it; could feel no depression, and it caused him no pain. There were no symptoms of concussion or compression, only a headache. Now during the last few months several patients have found their way into the hospital who had fallen into a hole and had either inspired street gas or had not inspired any air at all for a time, and these men acted much as this man did; they recovered in a night and a day, helped by sleep and rest; he was put in bed and given pot. brom. gr. xxx. Soon he was asleep, breathing naturally. On the third morning after entrance his only complaint was of a headache in the frontal region; temperature and pulse normal. On the fourth morning, however, while making my rounds, I offered him my hand and found, to my surprise, that he could neither reach nor grasp it, dolefully explaining that he had lost the power of moving his arm during the night. Nor could he move his leg, yet he had sensation in both. I immediately bethought me of the abrasion I had noticed. Finding the spot, I made pressure over it, when he gave a cry of pain. Believing that a fracture existed which had not been recognized on account of the paucity of symptoms, I communicated with Dr. W. C. Phelps, the attending surgeon. He decided to make an exploratory incision. A diagnosis of fracture was made, and after a good-sized flap was raised, there was revealed a fracture with depression at the junction of the lambdoid and sagittal sutures, which presented the appearance that two capital Y's would, if their stems were joined, and implicating the occipital and both parietal bones. It became necessary to trephine three times before the depressed bone could be elevated. A large clot was found and removed, also a spiculum of bone

which had been driven through the membranes of the brain and penetrated the brain substance. Eight hours after the operation the patient could move his arm. The next day he could move his foot a little. Mental condition not much changed. Same night temperature 104° , pulse 120. Next day 105° ; at night, $106\frac{1}{2}^{\circ}$, pulse 132. From this time the temperature and pulse dropped, and he gradually improved. Aug. 28th, was better, no pain; appetite fair; temperature 100° , pulse 90. Aug. 30th, he developed facial erysipelas, was sent to the pavilion and came under Dr. Cary's care, the visiting physician. While suffering from erysipelas, swelling of the parotids was noted. His temperature ran very high, usually 106° . Sept. 3d, pronounced convalescent from erysipelas, suffering from pyæmia. Sept. 5th, temperature, at midnight, $107\frac{1}{2}^{\circ}$, pulse 140. Same day died at 4 o'clock, P. M. Sept. 6th, autopsy. Pericranium stained with blood. Inside of scalp greatly congested. Fracture of skull from the nasal notch to the foramen magnum. Frontal bone fractured at the line of suture. Sagittal suture separated, at the junction of the lambdoid and sagittal sutures, the lines of fracture extended in many directions, considerable depression of the inner plate with none of the outer. Occipital bone fractured from this point to the foramen magnum, the line of fracture tending to the right enough to avoid the occipital protuberance. Dura mater reddened and marked with pus and lymph. Where the spicula of bone had entered, the brain tissue had undergone a degenerative change. There was a large clot near this point. No effusion.

CONSERVATIVE SURGERY.

BY P. W. VAN PEYMA, M. D.

J. N., a boy of 16, while employed in the upper story of a planing mill, fell through the elevator opening, a distance of about sixteen feet. When seen, he was found to have received, in addition to other injuries of a more trivial character, a com-

pound dislocation of the lower end of the right radius. By enlarging the opening through the skin this was readily reduced. In the course of the following two weeks serious inflammation and suppuration of the wrist and hand ensued, necessitating a number of incisions. Despite these, the suppuration continued, resulting in the rupture of a vein and consequent serious hemorrhage. At the end of three weeks from the time of injury, the condition of the patient, both local and general, was bad; the hand and wrist greatly swollen, the discharging pus far from laudable and the circulation of the parts decidedly impaired; the pulse being weak and rapid, the stomach irritable. A week later the condition being unimproved, an aneurism of the radial artery was observed developing, the onward course of which, in spite of compression, we were unable to check. A ligature applied cut through a few days later, and rupture occurring, the hemorrhage was controlled by the attendants by means of a tourniquet, which, as a precautionary measure, had been applied a number of days previous. Counsel was now called, and the search for the radial artery being futile, the hemorrhage was temporarily controlled by means of four strong ligatures, including most of the tissue anterior to the bone. Amputation to be performed the following morning was advised as affording the only hope for recovery. The following morning Dr. C. C. F. Gay was called in consultation and resection of the lower end of radius decided upon. This was readily accomplished, the only apprehension being the general condition of the patient, which was extremely critical. For the next few days, the question of life and death was very evenly balanced, and the convalescence which ultimately occurred was delayed for many weeks. At the time of this communication, however, the patient has for a considerable period been at work, earning his former wages, with a hand which, although considerably weakened, is in all other respects of great usefulness.

Two points of practical interest occur in reviewing this case. In the light of future events there can be no doubt that imme-

diate resection would have been the better treatment. I was withheld from this by having recently seen a case of compound dislocation of the ankle joint result in a very useful joint after simple reduction.

Also the case calls attention to the advantages of conservative surgery. Had the advice of the counsel first called been followed, the boy, if alive, would still be seriously crippled in the long years to come. Why amputation should have been preferred, appears unaccountable, as the shock of the operation would have been at least as severe.

Selections

BRIGHT'S DISEASE.

BY ALONZO CLARK, M. D.,

Professor of Pathology and Practice of Medicine, College of Physicians and Surgeons,
New York.

First patient, a male, about fifty years of age. He states that he has been confined to the house about four months; that he has to stagger from one place to another across the floor, but that he is better now. The feet are swollen; much less, however, than they were previously. He prefers to lie on the left side at night, which may account for the fact that the left leg is swollen more than the right. The leg pits deeply. He also complains of having pain in the back. This symptom, with the weakness in the limbs which he complains of on walking, would suggest spinal disease. I have known persons with the legs considerably swollen. They could walk well enough, but when they got on the bed they could not lift their legs up. This patient says such has been his case also. That, probably, is the explanation of his awkward movement, especially as he has had no paralysis anywhere else. It is true he thinks the sensation in his legs is considerably diminished, but when I pinch him he grumbles.

Then the question is, what is the cause of the swelling of his legs? That is the most marked feature of his case. The answer naturally is, kidney disease; but Dr. Wheelock informed me that he examined the urine and did not discover albumen. That may be; for persons sometimes come to me saying they have Bright's disease, been so called by their family physician, and I examine the water and find no albumen. I do not conclude that they have not Bright's disease, but continue to examine it every second or third day for three or four weeks, because I know the microscopic, the chemical and the clinical symptoms are often absent for two or three weeks in a case that is really confirmed, and then will come again. The fact, therefore, that no albumen has been found in the water is by no means conclusive, especially when we have the evidence of the œdema. The œdema has been confined mostly to the legs and feet; he says he has not had any swelling of the hands.

There is an early sign of coming œdema that is, however, fallacious as a distinctive sign. I refer to the tear line. A little œdema will come on the conjunctival membrane of the lower lid, and pressing the lid against the eye, will force it up on to the top of the lid, and it will then have a little wire appearance, or the appearance of a small thread running along the lower eyelid. This patient has that. There is a little œdema of the conjunctiva elsewhere also. It goes away when you lift the lid, but comes again immediately after. He says there has been no enlargement of the abdomen.

He has had trouble in going up stairs during the last week or two, but it seems to have been due principally to the condition of his legs. He says he does not get out of breath except on some exertion.

We will examine his chest and abdomen. The fact that he prefers to lie on the left side is rather evidence against cardiac disease. Persons who have much of that trouble are very apt to lie upon the right side or back. I do not get any signs of valvular lesion about the heart, although there is a little hyper-

trophy of that organ. There is no pain in the chest. There is dullness behind, over the lower portion of the thoracic cavity, indicating a little fluid in either pleural cavity. There is, you will observe, some œdema of the face and swelling under the eyes.

I think this is an instance in which it is safe to infer that there is some trouble with the kidneys, and that, at the present time, conclusive evidences are not apparent, but perhaps a week hence it will be different.

With regard to the treatment in such a case, the great point is to keep himself warm. If he is obliged to go out in cold weather, he should protect himself with an abundance of clothing. If he is not obliged to go out, it is better, in cold weather, to keep in the house. I have kept such patients in the house all winter, and directed them to keep the temperature of their part of the house at 72° F., night and day. Not so particular at night, because the bed-clothes will protect them, but it is better to have it uniform. This man cannot do that; he will have to protect himself as much as he can in cold weather by clothing. A steam bath is a very excellent thing, to be taken twice a day, and anybody can arrange a home apparatus for that purpose. It may be prepared by taking a tin can that will hold a couple of gallons of water, covered with some utensil; put a tube in the dome of it; connect with this tube another one, six feet long, having an angle, which will convey the steam to the wooden chair on which the patient sits while covered with blankets, fastened about the neck. In a few minutes the patient will begin to perspire, and this may be kept up say twenty minutes or half an hour, when he should be well rubbed off, and if it be in the evening, as I generally direct, he should put on his night clothes and go to bed. If he sweats a little after that, all the better. Then in the morning before he gets out of bed, he should be rubbed thoroughly with a dry flannel so as to stimulate the circulation. That stimulation of the circulation of the skin with dry flannel or some agent that is equal to it should be practiced

every day, whether he takes the bath or not the night before. I was in consultation near here some years ago, and it was agreed that to sweat the patient was desirable, and we were devising a plan by which it could be carried out when the nurse asked what was wanted. It being explained to her, she said she could do that. Boil a peck of potatoes ; wrap them in a cloth and lay them close to the body. She did so, and it worked very well. It is often the case that bottles of water, not exactly hot but pretty nearly, are enveloped in damp cloths and laid alongside the body. The œdema will sometimes disappear on the use of these steam baths, but commonly it is necessary that some diuretic be used to accomplish that. All effusions that are observable in the body are easiest carried off by the kidneys, disturbing the system less than if carried off by any other emunctories that are capable of doing it.

For him, probably, as good a diuretic as any that can be prescribed is the sal diureticus, the acetate of potash, twenty grains every two hours, in water ; and the infusion of digitalis, commonly a dessert spoonful, or two drachms, will be enough, taken three times a day. He cannot conveniently take it with the salt, because he takes that every two hours.

FACIAL PARALYSIS.

Case 2.—This man complains of a disfigurement of the face. He works by night and sleeps by day, and about two weeks ago, having gone to bed perfectly well, he awoke, and observed that the right side of the face was paralyzed. The right eye watered. No pain was felt, but the face appeared disfigured.

This kind of deformity, paralysis, often comes of inflammation of the theca of the seventh nerve, the portio dura, and in that case leeches are the quickest remedy that we can use, applied as near to the source of the nerve as can be done ; but in this case there is no tenderness at all. I press pretty hard, to the extent of a couple of pounds weight, and he says it does not hurt him any. This is not a very uncommon affection, and it generally comes

just as in this man's case ; it comes in the night, and I think it is more likely to occur if there is a draft of air upon the side of the face corresponding with the paralysis. Many of these cases will be relieved without any remedy in the course of four, five or six weeks. In others it is of very considerable duration ; indeed, in some it is not relieved at all, being carried for years. Relief, when it is effected, is obtained from various sources ; sometimes from electricity. Medicine, I think, has no power over it at all ; at least I know of none. As just said, electricity seems to be remedial in certain instances. Dr. Detmold, some years ago, invented a little electrical apparatus which he thought would act well in these cases, and I think it does. It is a compound metal wire, containing two metals that act upon each other in a way to produce electricity. At one end is a hook which goes in the mouth, lifting the angle of the mouth up on the affected side, and at the other end is a hook that goes over the ear. He has the patient wear that continually, except while eating. It is a simple apparatus, and the saliva of the mouth probably aids in making it electrical.

You observe, as the patient smiles, how the face is drawn to the left side. There is no affection of the tongue that I can see. He can chew his food all right on either side. Sometimes the paralysis is so positive that the food will come out of the mouth when he chews with the teeth of the affected side, but it does not seem to do so in this man's case. I see some movement of the muscles of the paralyzed side, as he talks, which seems not to be entirely passive.

SPINAL SCLEROSIS.

Case 3.—Our next patient is a man about thirty-three years of age, who, as you see, has been led into the room by his wife. She says he has been sick about two years ; has not been able to walk for about a year and a half. He has cramps ; sometimes unconscious four or five hours after the attack. In the attacks the arms and legs are straightened and shake. The hands are

clinched, and he attempts to get out of bed ; talks, but appears to be unconscious. After the attack he asks what has been the matter, remembering nothing that had occurred.

Some of these symptoms point to epilepsy, while others do not. It is not uncommon that persons after an epileptic attack are really delirious, sometimes for half an hour, sometimes for four, five, or seven hours. She says he is white during the attack, which would not point to epilepsy.

Some days he cannot walk at all, and you will observe that muscular paralysis is plain enough. The next point arises, is there paralysis of sensation. Not being provided with a special instrument to test the sensation, we will take a card that will hold firmly pins stuck through it, putting the pins two or three inches apart, to begin with, and reducing the distance gradually as we test his sensation.

You will observe that there is no defect in the sensation in his case. We would infer that there is here thickening of the posterior column of the spinal cord and not of the anterior. This is not a very uncommon form of sclerosis. He has not the walk of locomotor ataxia, but his wife's description of his walk formerly corresponds to the walk of that affection. We may infer, then, that he really had locomotor ataxia, and that it is now being converted into paralysis. We have such a patient in the hospital at present, who was treated in a variety of ways, by medicines given internally, until we finally settled down upon the fluid extract of ergot, increasing the dose until he got to taking a drachm three times a day. He continued that an entire year, at the end of which time he was so far restored that he could take the place of orderly about the wards. He has now been in the hospital five years, and some of the professors show him to the students every year.

Now, as an encouragement in this case, I should think the same medicine would give some relief to this man. Dry cups might also be applied over the spine, as it can be done by some one of the family, by burning a piece of paper in a small-sized

tumbler, placing four on the back, two on either side of the spine. This, with the fluid extract of ergot three times a day, would be the treatment. I would not start out with a drachm of the medicine, but half a drachm, and see if he bears it fairly. This reminds me that we now have in the hospital a man suffering from dry gangrene of the toe. The pulse is good, and there is no obstruction in the arteries. We learned, after he had been in the hospital a day or two, that he had been eating rye bread; that for years he had eaten it whenever he could get it, and living in the West he could generally get it easily enough. The question presented itself before us whether this dry gangrene was the result of ergot which he got in the rye. In times past, when rye was used a great deal, dry gangrene occurred, which was attributed to the rye, not, perhaps, to ergot which it contained, for that was little known until about the time of Dr. Stearns. But I am not sure about the agency of rye bread in this case of dry gangrene of the toe.

GRAVES' DISEASE.

Case 4.—Here is a case that you will be interested in. You will observe, first, that there is swelling in the neck. I have not seen her before, but the case struck me in an instant as she entered. Second, there is some degree of prominence, not remarkable, of the eyes. And third, I suppose we shall find the pulse beat at the rate of 120, perhaps beating more rapidly than under ordinary circumstances, coming into a room where there are so many strange faces. But I do not find any pulse beat at all, either at the wrist or elbow. The heart beat, however, is strong enough, and exactly at the rate of 120. The hands are warm enough; I do not know why the pulse cannot be felt.

She has, then, three elements of what is sometimes called Graves' disease, because he described it before anybody else, in the English language. It is claimed for Basedow in Germany, and for Trousseau in France, but Trousseau acknowledges that Graves described it before, so that it is not very wrong to call it Graves' disease. The thyroid gland is swollen, the right side

more than the left, in this case. It is a mild case, showing the three characteristic features of it in a limited degree only. Congestion produces these swellings in the thyroid gland and behind the eye. How it should fall out that three parts of the body that are at a considerable distance from each other should undergo the same change, and the intermediate parts not be affected, is a matter difficult to explain. Still, case after case presents itself, though it is a rare affection, and we are obliged to assume that Graves was right in associating the three congestions (he did not explain it, however), and that it makes really one disease.

The patient says her general health is good; she eats well, digests well, has no pain. She does her housework and thinks she is as well as usual.

You ask what I would prescribe? That same fluid extract of ergot, because of its effect upon the capillaries. I would have her begin with twenty drops, increase it to thirty, forty, and perhaps to fifty, in a week or ten days, and if it works as well as it has done in some of the cases I have seen, she will be improved in a moderate length of time. Speaking from my own experience, it always gets well; but I notice in the records of other persons it does not always. At any rate, there is hope for improvement in this case, as it is not a very well developed one. It has these three features, but none of them marked in a high degree.—*Medical and Surgical Reporter*.

Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Regular Meeting, September 4th, 1882.

President, Dr. A. R. Davidson, in the Chair. Dr. C. M. Daniels, Secretary.

Present—Drs. Cronyn, Barrett, Bartlett, Storck, Abbott, McBeth, Fowler, Gay, Burghardt, Runner, Rochester, Cary, Brecht, Stockton, and by invitation, Drs. F. H. Potter, Frank, Fell, Clark, and Mr. J. W. Ward.

Essay—By Dr. George E. Fell, subject: "The Microscope and Medicine." The Essayist stated that our medical schools, or the great majority of them at least, do not profess to teach anything regarding the technology of microscopic investigation. Practitioners are sent out into the world, *suitably qualified* it may be, to practice medicine, but not knowing the difference between an eye-piece and an objective; totally unfit, so far as their medical education qualifies them, to use the microscope in the examination of the simplest object; knowing veritably nothing regarding the instrument which has done more to advance the science of medicine than any other in the long category of instrumental accessories. While reasonable persons will admit that "knowledge is power," at least "in the long run," it appears that many of our leading medical schools are controlled by the sentiment that microscopical knowledge does not enhance the physician's skill. Without a knowledge of histology, pathology, the normal and abnormal secretions of the body as revealed by the microscope, he is as fully—yes, according to many—better qualified to practice medicine than if he possessed this knowledge. That such a condition of things is to be deplored no thoughtful practitioner will deny. It would appear that the revelations already made by this wonderful instrument, the progress in medical science credited to its use, would have produced a different condition of affairs. It will be generally conceded that the value of the microscope is directly proportionate to the experience of the practitioner in its use, and a knowledge of histology and pathology is virtually necessary to its intelligent application in medicine. On this account the want of early training in these branches unquestionably deters many of the active practitioners of the day from giving any attention to those subjects. In the midst of an active practice it is quite improbable that time will be found to take up a new occupation, and, as considered by many of the older physicians, one of questionable value. The writer considered that the medical colleges were largely responsible for professional ignorance on this subject, and quoted Prof. Chas. H. Stowell as saying:

"I hold the great majority of the medical colleges of this country directly responsible for the lack of this love for scientific research. They seek to please the student by prejudicing him against the scientific investigation of disease, and they become practitioners before they are aware of their ignorance of matters that should have been familiar to them during the term of their pupilage. * * * But to the coming physician must we, as microscopists, look for a solution of the more exact nature of disease and the more effective methods for its prevention and cure." He spoke at length and *con amore* of the great value of the microscope in clinical medicine and briefly referred to the brilliant discoveries of Pasteur, Koch, Beale, and others, which the microscope alone had made possible.

Discussion—Dr. Cronyn had listened to the paper with pleasure; it did not, however, open an opportunity for much discussion. The views so well advanced would, he thought, meet the approval of all present. Although of late years the demands of a large practice had not given him the time to devote that personal attention to the use of the microscope which he should like, he considered it of the greatest practical value and believed that microscopy being taught practically in the medical schools would meet a needed want. He related several cases in which its value as an aid to diagnosis was signally displayed.

Dr. Barrett considered the subject a difficult one to discuss, as he considered the microscope the greatest instrument for the furtherance of knowledge, comparing it as great in its revelations of minuteness as the telescope in greatness, and that in medicine it was now invaluable as it so clearly defined function. He thought its future would be more in the hands of specialists, as the busy practitioner could not be expected to become an expert microscopist.

Dr. Rochester was sorry the essayist had made such sweeping assertions regarding the want of knowledge of the microscope among physicians in general, as he could hardly believe that the facts would warrant it. He thought, too, that the medical colleges devoted more attention to microscopy than was in-

timated by the essayist. In the Buffalo Medical College, courses had been established and the student could get a very good practical knowledge of the microscope. Students, however, did not seem inclined to embrace the advantages presented. He also called attention to the fact that as yet great diversities of opinion may be found among different microscopists, showing a lack of certainty among those who were looked to as our authorities. He recommended that at least a general knowledge of the instrument should be had among physicians and that specialists should be encouraged.

Dr. Bartlett thought that the younger members of the profession had greater opportunities and should be the ones to advance microscopic knowledge. The great field seemed to be to find the source or germ of diseases of a special character, and he believed we should soon know the real cause of zymotic diseases.

Mr. Ward believed the physicians were really more interested than the essayist gave them credit for. Without practice it is very difficult to see all that the microscope wants to tell, and that disputes often arose among those best fitted to judge. In general the physician best appreciates its use. He had the satisfaction once to observe living trichinæ moving in flesh. Patient was supposed to have died from typhoid fever, the microscope alone cleared up the doubt. He thought the microscope would naturally come into the hands of physicians.

Dr. Davidson was of the opinion that Dr. Fell had somewhat exaggerated the value of the microscope in medicine; although its usefulness was conceded as an important adjunct to other means of diagnosis, it was questionable whether, in clinical medicine, it was entitled to a much higher rank than the fever thermometer or stethoscope. He did not, however, believe that the essayist had exaggerated the lack of microscopical knowledge on the part of the general profession for which the medical colleges were largely responsible. During later years, at the Buffalo college, as Dr. Rochester had stated, opportunities had been presented to the student to gain some knowledge of microscopy,

but the course was accompanied with extra expenses, and the acceptance of it purely optional on the part of the student. He believed that some knowledge of the microscope and of the way to use it should be made obligatory—for with that foundation the young practitioner would be pretty certain to devote a good deal of his leisure during the first years of practice to its study—and thereby make the possession of a microscope of real value to him. His experience had been that those who had not acquired a knowledge of the microscope at college seldom obtained an instrument until they had got into an active practice; very rarely then do they take the time to acquire any correct knowledge of its use, and the possession of it was often injurious in that there was a temptation to guess at what was seen, instead of taking the advice of a qualified observer.

Dr. Fell believed that the study of the microscope should be made obligatory to the student, and that, if it was more fully understood, it would be better appreciated.

Voluntary Communications—Dr. Cary related a case of transfusion where there was hemorrhage from leg after compound fracture, it being a general oozing from capillaries, until patient was in a critical condition. Bleeding could only be checked by application of ice. About forty-eight hours before transfusion the hemorrhage apparently ceased and patient seemed dying from exhaustion; was unconscious; no pulse at wrist. Transfusion in ordinary way; about three ounces of blood used, which was followed by immediate improvement; flushing of face, consciousness; comparatively good pulse, and recovery seemed assured. A peculiar condition followed, being a hemorrhage into cellular tissue about the neck, there being found after death, which occurred a few hours later, several sacs filled with blood.

Dr. Barrett mentioned two cases of persistent hemorrhage from extracting teeth, it being capillary and checked with great difficulty.

Dr. Gay exhibited a lady's shawl pin, which he had removed from the male urethra by performing the operation of external urethrotomy. The pin measures five inches in length; the head

is three-eighths of an inch in diameter. It was so securely lodged well down in the urethra as to foil all attempts on the part of the patient and his physician to remove it.

Dr. Gay also exhibited some specimens of gall-stones, one which measured an inch in diameter, which had been taken from the gall-bladder at an autopsy, recently made. A few years ago, Dr. G. reported to the association two cases, and exhibited gall-stones from a third case, all three of which he had treated with large doses of olive oil, with ordinary doses of podophylin. The gall-stones found at the autopsy were from the same patient as were those exhibited at a meeting held December 4, 1866. Doubts at that time were expressed about their being gall-stones. A member is reported as saying (*Buffalo Medical and Surgical Journal*, vol. vi, p. 214) that "They are soft and pliable and not hard like gall-stones. * * To say the substances, presented by Dr. Gay, are true biliary calculi, is more than their appearance would warrant. * * They appear to be composed of cholesterine and fecal matter and probably formed in the intestinal canal." The gall-stones now shown were, when taken from the gall-bladder, of the consistence of old cheese and were easily cut with the knife. After being dried, they have become hard, like stone. As those formerly exhibited were identical with these (except the larger one) in color, shape, size and consistency, the autopsy proves that he was not in error in calling the former gall-stones. The patient did not die in consequence of them, nor had he any symptoms of their presence for the past fifteen years.

Dr. Cronyn related a case where patient was cut by glass, the brachial ulnar and radial arteries all being severed; there being no pulse at wrist. Three acupuncture pins were used with figure of eight sutures. In three days the two lower pins were removed and there was perceptible feeling of radial pulse, evidently showing that the inflammatory action had increased dilatation of the vessels on lateral and posterior aspect of arm.

The question regarding the value of olive oil as a gall-stone solvent was discussed by Drs. Rochester, Gay and Davidson,

the prevailing opinion being that it only acted mechanically in facilitating their passage.

Dr. Bartlett asked if any one present knew of anything that would dissolve gall-stones.

Dr. Rochester said that chloroform, given internally, was highly recommended.

Prevailing Diseases—Dr. Cronyn reported scarlatina and diarrhœa.

Dr. Bartlett, dysentery and occasionally diphtheria, and related a case where child had a diphtheritic-like eruption externally three days before throat symptoms appeared, and which terminated fatally.

Adjourned.

CLAYTON M. DANIELS, *Secretary*.

Editorial.

THE BUFFALO STATE ASYLUM FOR THE INSANE—ANNUAL REPORT.

Through the courtesy of the Superintendent, we have been favored with a copy of the Eleventh Annual Report of this excellent institution, containing the annual statements of the Board of Managers, the Treasurer's report, and the report of the Superintendent. The pamphlet is full of valuable information, especially interesting to the profession, inasmuch as it presents a record of work in an important department of medicine, from the pen of Dr. Andrews, whom we regard as one of the ablest alienists of the country.

Referring to the results of treatment, the Superintendent makes these forcible remarks: "While in a majority of instances in which the disease has passed into a chronic state recovery cannot be looked for, still, much good can be derived from care and treatment in an asylum. The regularity of life and the favorable hygienic conditions under which patients are placed

result in benefit to their general health and promote self-control, with such an amelioration of their condition that quite a proportion can return to their homes and enjoy the comforts and satisfaction of domestic life. * * * In view of the fact established by experience that the curability of insanity is in proportion to the *recent character* of the disease, the law makes it obligatory upon public officials to send cases which come under their jurisdiction, within ten days, to some asylum for treatment. This would seem to insure early care and treatment to all the insane of the public class before such changes occur in the brain as place the subject of them beyond the reach of medical skill and the curative measures adopted for their recovery. It may be asked why, under such circumstances, so many reach the chronic stage without treatment, and why, every year, the various asylums report so many chronic cases admitted? The answer is at hand. One potent cause is found in the fact that insanity is often slow and insidious in its inception and progress, and that its changes in character resemble, so closely, mere eccentricities of conduct that two or more years are passed before it is fully appreciated, and then, perhaps, only when the person becomes troublesome or violent. *Ignorance of what insanity is*, is a bar to its ready recognition."

This extract contains the experience of an accomplished expert, who has had exceptional opportunities to study insanity in all its phases, and is suggestive to the profession of the necessity of promptness, not only in the diagnosis of mental diseases, but in the removal of such patients to asylums, which are, in fact, hospitals for the treatment of mental diseases, under the personal supervision of physicians who make the study and treatment of this special class of diseases their life-work.

The report is quite full in tabulated statements from the records of the year, of the cases under treatment, which afford valuable data in regard to the forms of insanity admitted, the assigned causes, civil or social condition, degree of education, hereditary transmission, duration of insanity prior to admission,

ages of the 219 cases admitted, supposed duration of insanity before admission, suicidal or homicidal tendencies, number of attacks in those admitted, nativity, occupation, causes of paresis in the nine cases admitted, etc. The tabulated statement of the hereditary transmission of insanity contains a suggestion which is worthy of consideration. Of the cases from which the family history could be traced, 38 per cent. traced their insanity to the maternal branch and 24 per cent. to the paternal branch. This shows how potent an influence the mother exerts in moulding the mental peculiarities of her offspring, a fact more generally accepted by the profession in regard to the physical conformation than the mental and intellectual.

We have not space to draw farther from this valuable report. It bears evidence of earnest and careful labor in this important department of medical science, and also demonstrates what we have before assured our readers, that our State Asylum possesses advantages, not only in the superiority of the arrangement and plan of its buildings, which admits of a thorough classification of patients, but also in the skill and attainments of its medical staff, whose efforts to raise the institution of whose interests, administrative and professional, they are the custodians, to the front rank in the special field assigned it, have met with the success which earnest and conscientious labor in a noble cause justly deserves.

The Superintendent pays a graceful compliment to his attendants and employees for their fidelity to duty and for their success in the management of the patients under treatment. We join in giving the endorsement of the profession to the excellent work which this report presents. Not only Dr. Andrews, but his accomplished assistants, Drs. Granger and Crego, by their ability and zeal, in the brief period during which the asylum has been open for its work, have established for the institution an enviable reputation in the successful management and treatment of the insane.

THE AMERICAN PHARMACEUTICAL ASSOCIATION.

The thirteenth annual meeting of this Association was held at Niagara Falls, Sept. 12 to 15, and in point of attendance and general interest it exceeded any of its predecessors. The presence of the fair sex was particularly noticeable, most of the members being accompanied by their wives, sisters, cousins or aunts, and as all were decorated with a badge on which a gold mortar was conspicuous, the mortar-lity at Niagara Falls during their session was striking.

The initial session of the organization was held in the afternoon and was occupied by organization and the reading of the President's address. The mornings of the two following days were devoted to business and the afternoons and evenings to sight seeing and entertainments. Several good papers were presented, noticeably those of Prof. Bedford, of New York, and Wm. Saunders, of London, Ont., but the dearth of papers of any real pharmaceutical scientific interest was noticeable. The exhibition of pharmaceutical products was exceptionally good, as will be seen from the following interesting communication from our correspondent:

It would sometimes seem as if in the earnest desire to pursue investigations in pathology and the natural history of disease, so fascinating to the physician with scientific taste, that we are in danger of losing sight of the importance of drugs and their effect on the animal economy in disease.

For some time past therapeutic nihilism has been fashionable. To this many causes have perhaps contributed, but for our present purpose it is only necessary to mention one, and that is the past unreliability of drugs.

It is becoming apparent that this want of faith in the efficacy of drugs is passing away, and indeed he who would accomplish much by their aid must earnestly believe in them himself.

Patients are quick to detect, even in the manner of the prescriber, his lack of absolute confidence in the medicine used. The pharmacist must after all be our ultimate reliance, and it would be well perhaps if we stopped more frequently to inquire what is being done by them, to provide us with reliable, convenient and more palatable medicines.

These thoughts are suggested by a recent visit to the handsome display of "The American Pharmaceutical Association," at Niagara Falls.

Possibly a brief description of some of the exhibits may not be uninteresting to your readers. In the centre of the room was the artistic display of chemicals

from the well-known house of Powers & Weightman. The reputation of this house is well established, and they always make a beautiful display. Pills on the right of you; pills on the left of you; pills in front of you; pills, white, red, yellow, brown, black; pills, gelatine coated, sugar coated; pills, compressed; pills! until one wonders if we are not intended to be *fed* on pills; and we echo the remark at our elbow: "At last pills look good enough to eat!" We have no disposition to discuss the relative merits of different coatings, or of any coating, or whether pills should be manufactured in this wholesale way. The fact that they are manufactured in immense quantities and dispensed by physicians seems to indicate a demand that cannot be suppressed. Our patients will not swallow bulky or unpalatable pills, and the important point, after all, is that they are as represented.

In the absence of a Government inspector instances of fraud should be ruthlessly exposed and published far and wide.

In the exhibit of W. H. Schieffelin & Co. we noticed a number of original packages of opium, cajeput oil, etc., and some Chinese drugs with unpronounceable names, evidencing the enterprise of this widely-known firm. Some fine samples of *genuine* castile soap, an old-fashioned and useful article—quite difficult to find pure now—also samples of oleates, etc.

John Wyeth & Bro., of Philadelphia, were represented with a full assortment of their compressed pills, and, amongst the novelties, Quinquina, "a natural combination of the alkaloids of cinchona bark," claiming to be cinchona bark, minus its woody fibre and resins, and not so apt to induce cerebral excitement, grain for grain as efficient as quinine, highly recommended and deserving of a trial.

Among the newer preparations the "Dialysates" of McIntyre & Emburg, of New York, deserve mention, claiming uniformity of strength (one grain of the pure drug to two grains of the dialysate) and freedom from precipitation and cloudiness when mixed with water, syrup, etc.

Seabury & Johnson made a fine display of their excellent plasters, now well known and justly valued for their convenience. They also show Lister's gauze, made with carbolic acid, eucalyptus, and iodoform. This energetic and enterprising firm make a full line of materials for Lister's dressing of excellent quality. Among their convenient novelties is isinglass plaster, on Canton flannel.

Thorp & Lloyd Brothers displayed, apparently, podophylin enough to purge the whole population. They manufacture, largely, different resins and alkaloids. Amongst others we noticed a fine sample of white alkaloid of hydrastis.

T. W. Heinemann & Co., of Chicago, made a fine exhibit of their specialty in water-proof plaster, preserving the pliability of the fabric wonderfully; for those esthetically inclined they make a water-proof court plaster on satin! Their mustard on muslin seems well adapted for the ready and convenient rubefacient action.

In pharmaceutical apparatus, the Porpapine Pill Coating Machine of Charles C. Wells, of Saratoga, is a novelty, we should think admirably adapted for the purpose of enabling the dispensing druggist to rapidly and easily coat pills. It is certainly ingenious, and deserving investigation by druggists. Those who have tried the manufacture of butter of cacao suppositories will welcome the suppository machine of A. M. Knowlson, by which rectal and urethral suppositories can be quickly made, the chief objection to it, however, being the high price.

Space will not admit of mention of the details of all the exhibits, but the whole display was highly creditable, and shows that the pharmacists are alive and awake, and anxious to meet every want of the medical profession.

One of the meetings of the association was made especially interesting by the visit of Prof. Carpenter, the distinguished physiologist of London, who gave an interesting account of the microscope and its development.

The officers for the ensuing year are as follows: President, Charles A. Heintsch, Lancaster, Pa.; First Vice-President, John Ingalls, Macon, Ga.; Second Vice-President, Louis Dohme, Baltimore; Third Vice-President, William B. Blanding, Providence; Treasurer, Charles A. Luffts, Dover, N. H.; Permanent Secretary, John M. Maisch, Philadelphia; Reporter on Progress of Pharmacy, C. Lewis Diehl, Louisville.

BUFFALO MEDICAL COLLEGE.

Session of 1882-83.

The introductory lecture to the present session was given by Prof. R. A. Witthaus, on Wednesday evening, Sept. 27th, at the college building. Dr. Witthaus has been elected to the Chair of Chemistry, made vacant by the resignation of Dr. Doremus. The subject of his first lecture was, "The Relations which Chemical Force bears to the other Forces of Nature and to the production of Animal Force." The lecture was illustrated by numerous experiments, and made a favorable impression upon the class and the audience.

We learn that Dr. Miner, long connected with this journal and with the college, has been compelled, by the state of his health, to resign the Chair of Special and Clinical Surgery. Prof. Moore will add the work and duties of the position thus vacated to his labors during the present session.

EDITORIAL NOTES.

LACTOPEPTINE.—We call attention to the advertisement of the New York Pharmacal Association, and particularly to the certificate of Prof. Attfeild, of London, as to the composition and properties of *Lactopeptine*. It has for years been a favorite remedy of ours, and we are glad to learn that it is being very largely used in England.

THE August number of the *Edinburgh Medical Journal* has the following handsome notice of the preparations of a well-known New York firm. As an evidence of foreign appreciation of American skill, and as an echo from across the sea of what we have ourselves said of the preparations of this old and trusty house, we quote the notice entire:

“W. H. SCHIEFFELIN & CO.’S SOLUBLE PILLS AND GRANULES (New York).—We have been favored with a case containing one dozen bottles of these pills and granules, and we have no hesitation in highly commending them to the notice of the profession. The pills are perfectly globular, and finished with a beautiful nicety surpassing anything we have before witnessed. They are covered with a thin, transparent coating, which is perfectly tasteless and easily soluble in the mouth or stomach. This coating is so thin that it does not add materially to the bulk of the pill, and, being transparent, discloses to the eye the exact color and appearance of the pill-masses, and thus tends, in no small degree, to prevent one pill being mistaken for another. This coating appears to be quite sufficient to protect the pills from atmospheric influences, and to preserve the soluble condition of the mass. All pills should be sufficiently consistent to maintain their globular form, and yet sufficiently soft to melt in the stomach. These two conditions are possessed in a remarkable degree by Schieffelin’s pills and granules. Another excellent property possessed by many of these pills is their small size, many of them being *very small*, such as those containing morphia, digitalin, etc. They prepare a pill containing ‘ergotin,’ their 3-grain pill representing 15 to 17 grains of ergot. This pill is a valuable addition to our armamentarium. The firm of W. H. Schieffelin & Co., of New York, holds the highest place among American pharmaceutical chemists, and consequently the quality and quantity of the various ingredients can be perfectly relied on. The price of the pills is very moderate, and quite within the reach of the great majority of patients. The case was accompanied with a ‘Formula List, with Notes,’ giving the composition of each pill and the price. For perfection of finish these pills excel any pills we have ever seen, and we believe they require only to be known to the profession to be extensively prescribed.”

The world-wide reputation of the *Edinburgh Medical Journal* makes such a notice of great value.

Reviews.

Essentials of Vaccination. A Compilation of Facts Relating to Vaccine Inoculation and its Influence in the Prevention of Small-pox. By W. A. HARDWAY, M. D., Professor of Diseases of the Skin in the Post-Graduate Faculty of the Mo. Med. College, etc., St. Louis. Chicago: Jansen, McClurg & Co. 1882.

Dr. Hardway has succeeded in producing a very interesting book, containing a great deal of useful information. It is not intended as a comprehensive treatise on vaccination, but the author modestly claims it to be "a careful compilation of the most essential facts relating to the subject." He treats of the History of Vaccination; Variola in Animals; Nature of Vaccinia; Vaccinia in the Human Subject; Abnormal Modifications and Complications; Re-vaccination; Merits of Different Kinds of Virus; Methods of Obtaining and Storing; the Operation of Vaccinating, and a Brief Review of the Objections to Vaccination. The author's claim for it is abundantly fulfilled, and the book will, no doubt, prove acceptable to the profession.

Labor Among Primitive Peoples. Showing the Development of the Obstetric Science of To-day, from the Natural and Instinctive Customs of all Races, Civilized and Savage, Past and Present. By GEO. J. ENGLEMAN, A. M., M. D., Professor of Obstetrics in the Post-Graduate School of the Missouri Medical College, etc. St. Louis: J. H. Chambers & Co. Cloth 8vo., pp. 202. Price, \$2.

The amount of labor and research involved in the production of this work must have been very great. Some of the chapters have appeared before in the *American Journal of Obstetrics*, and other journals, but the subject is so interesting to the physician, and, in a certain sense, important, that their preservation in book form is a subject for congratulation. It is interesting to observe how similar the obstetric practices of primitive people are to our own, and in those cases in which the hands and external manipulation alone were sufficient, there is evidence of expertness not inferior to that of to-day; indeed, we will find much to study, to imitate and to develop. The book is well illustrated and is in every way a credit both to the author and publisher.

A Treatise on the Science and Practice of Medicine; or, the Pathology and Therapeutics of Internal Diseases. By ALONZO B. PALMER, M. D., LL. D., Professor of Pathology and Practice of Medicine and of Clinical Medicine in the University of Michigan, etc., etc. Volume II. New York: G. P. Putnam's Son, 27 and 29 West Twenty-third Street. 1882.

The present volume treats of diseases of the respiratory system, diseases of the heart, diseases of the urinary apparatus and urinary diseases, diseases of the male sexual system, diseases of the brain and nervous system, diseases of the mind, and parasitic diseases. It is from the pen of one of the most industrious writers in the profession, and in its arrangement shows commendable care, labor and ability, not only in its details but in the general treatment of the subjects. We recognize, in reading its pages, a familiar style to which, many years ago, we were accustomed to listen, and the subject-matter, especially the therapeutics, presents the author's views as they were given to the medical class of which we were once a member. The work, therefore, possesses more than ordinary interest to the writer, and in its perusal and examination we have been turned from the spirit of severe criticism, not only by the superior merits of the volume, but by the appreciation always entertained for the ability and wide experience of the author. We regard the work as a valuable addition to our medical literature. The author has enjoyed a rare experience in diseases peculiar to the West, and the profession, in that section especially, will find the work a most important guide in the pathology and treatment of diseases the type of which is modified by climatic influences. We cannot enter upon a critical review of the author's opinions of morbid phenomena, nor of the manner in which he presents them. Prof. Palmer's reputation is a sufficient guarantee of the value of the production he has given to the profession. We warmly endorse the work, and are assured that it will fill an important position in the libraries of medical men.—L.

BOOKS RECEIVED.

The International Encyclopedia of Surgery: A Systematic Treatise on the Theory and Practice of Surgery by Authors of Various Nations. Edited by JOHN ASHHURST, Jr., M. D. Illustrated with chromo-lithographs and wood-cuts. In six volumes. Vol. II. New York: William Wood & Co. 1882.

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Original Communications.

HISTOLOGY OF THE NERVES: A CONTRIBUTION OF THE LATEST
RESEARCHES.*

BY FRANK DUDLEY BEANE, A. M., M. D., of New York City.

II.

Having carefully examined, in the previous paper, the minute structure of nerves and nerve-tubes, we are in a position to inquire: How do nerves terminate at the periphery?

I shall enclose, within brackets, such material as has been extracted from "*Leçons de Physiologie Générale et Comparée du Système Nerveux*," par A. Vulpian, Professeur à la Faculté de Médecine de Paris, etc., etc., thus avoiding all confusion as to the balance of this letter-press, which has been derived from Ranvier's work.

[The ultimate peripheral terminations of nerves are found to consist of five varieties:

1. Subcutaneous networks.
2. Tactile corpuscles.

* Translated, abridged and arranged from "*Leçons sur l'Histologie du Système Nerveux*," par L. Ranvier, Professeur de l'Anatomie Générale au Collège de France, Paris, 1878. This work is beautifully illustrated with chromo-lithographs and wood-cuts, which, unfortunately, it is not practicable to reproduce here.

3. Pacinian corpuscles.
4. Corpuscles of Krause.
5. Terminal arborizations (Ranvier).

a. Subcutaneous Networks.—These are found within and beneath the skin and mucous membranes and other organs, endowed with sensibility. They appear as intra- or subcutaneous delicate networks of nerve axes-cylinder. In the frog there are larger or smaller nuclei in contiguous relation with the nerve-tubes of these networks, as I (Vulpian) myself have seen.

b. Tactile Corpuscles.—Meissner and Wagner first demonstrated this mode of termination.

These corpuscles are chiefly found in the skin of the palms and dorsum of the hands and feet, the pulps of the fingers and toes, of the glans penis, clitoris, the lips, and fungiform papillæ of the tongue. A delicate section, perpendicular to the surface of the skin in these regions, hardened in acetic acid, shows, that while some papillæ are simply vascular, others enclose a small ellipsoidal organ, with its long axis parallel to that of the papilla.

This is the *tactile*, Meissner's or Wagner's corpuscle.

Meissner and Wagner look upon them as small sacs, containing homogeneous, finely-granular, semi-fluid matter. They have a membranous external layer, showing transverse and parallel striæ. Sometimes the corpuscle receives only a single nerve-tube, sometimes two or more. The tubes preserve their double contour as far as the border of the corpuscle. They enter its interior—whether *always* is not decided—and are in contact with the internal face of its wall, taking a spiral course therein, and giving it the appearance of transverse striation (Meissner). That this striation takes its origin from the spiral course of the nerve-tube is proven by cases of atrophy of the supply nerve-tube, wherein the transverse striæ are replaced by a series of very fine oil-globules. It is probable the primitive nerve-tube (or tubes) loses its medullary and cellular sheaths at the border of the corpuscle, and that only the axis-cylinder pierces the corpuscle,

c. Pacinian Corpuscles.—Also called “corpuscles of Vater,” after him who first described them, are found in the subcutaneous cellular tissue, generally, especially along the track of the collateral nerves of the fingers, of the sympathetic nerve-fibres, mesentery, plantar surface of the feet, dorsum of the hands and feet, fore-arm, neck, in relation with the pudic, intercostal, sub-orbital nerves, nerves of bones, articulations, arm and breast. They consist of a sac analogous to that of a tactile corpuscle, only it is larger and longer and is invested by several concentric layers of cellular tissue. At the centre of its pedicle a nerve-tube is seen to run as far as the wall of the sac, the latter being continuous with the nerve-tube’s Schwann’s sheath.

The sac’s contents are soft and slightly granular, in the midst of which the nerve-tube is found. The latter consists simply of an axis-cylinder, takes usually a rectilinear, sometimes a tortuous course within the corpuscle; at times it bifurcates at a greater or less distance from its entrance.

The single axis-cylinder (or its bifurcations) often terminates as a button-like enlargement. Jacobowtsch claims they end at the summit of the corpuscle (in the cat’s mesentery) in the nucleolus of a cell, several of which exist within a Pacinian corpuscle. The different investing layers of connective-tissue are separated from each other by spaces filled with a more or less fluid, transparent substance.

d. Corpuscles of Krause are the ultimate points of termination of nerve-tubes in mucous membranes. In structure they are simply modified tactile corpuscles. The penetration of two nerve-tubes into the interior (usually but one enters), greater fluidity of the sac contents (in certain cases), greater branching of the penetrating axis-cylinder, the ultimate termination of the axis-cylinder, or its branches, in a blunt extremity (which may sometimes show an enlargement), constitute the differences between these and the tactile corpuscles. They are found in the conjunctiva, mucous membrane of the lips, tongue (at the base of the filiform and fungoid papillæ), velum palati, glans penis and clitoris.

e. Terminal Arborizations (Ranvier) are only found in muscles. M. Rouget,* Professor of Physiology at Montpellier, France, furnished most important data upon this subject. He claimed that nerve-fibres branched a certain number of times before reaching muscles. Each branch comes in contact with the sarcolemma, wherewith the sheath of Schwann becomes confounded; the medulla disappears; the axis-cylinder penetrates the interior of the sarcolemma and becomes expanded upon the surface of the muscular substance as a granular mass, ordinarily slightly prominent, forming more or less raised plates, called by M. Rouget, *terminal motor-nerve plates*. At this point there is an accumulation of cells from the sheath of Schwann.]

M. Ranvier, by new and delicate methods, shows:

1. That it is the sheath of Henle, not that of Schwann, which becomes continuous with the sarcolemma.
2. That beneath the sarcolemma, and upon the muscular tissue itself, lies a granular substance; this latter contains special cells, called *fundamental*, which are very large, clear, oval, have a double contour, and very large nucleoli.
3. That this granular substance, which should be called the *nervous eminence*, is pierced by the terminal nerve-filament, which consists merely of an axis-cylinder and (presumably) Schwann's sheath, having lost its medulla at the interannular constriction previous to piercing the sarcolemma, and its sheath of Henle being confounded with the latter.
4. That this axis-cylinder *within* the nervous eminence forms itself into *arborescent branches*.
5. That these neither form loops nor anastomose with branches from other nerve-tubes. Each nerve-tube branch is free and independent of the other.
6. That these arborescent branches, *by their limbs or terminal points, pierce the granular substance surrounding them, and come into immediate contact with the muscular fibrils.*

* "Note sur la terminaison des nerfs moteurs dans les muscles chez les reptiles, les oiseaux et les mammifères." *Compt. rend. de l'Acad. des Sciences*; 28 Sept., 1862, t. Iv, p. 548.

7. That the nervous eminences contain, besides the fundamental, two other kinds of nuclei; one kind, small and of irregular contour, situate upon the internal face of the investing membrane of the eminence, being similar to those of Henle's sheath, are called *vaginal nuclei*; the other kind, situate upon the branches of the terminal arborizations, of irregular outline, smaller than the fundamental, are called *arborization nuclei*.

8. That this terminal arborization is the form of ultimate termination of nerves in the muscles of reptiles (lizards) and mammals (rabbits). In the frog, neither granular substance nor fundamental nuclei exists; the termination occurs by short and straight stems (filaments), furnished with their respective nuclei.

Thus, M. Ranvier has penetrated further than M. Rouget, amplified the labors of Krause,* corrected the descriptions of Kühne† and Gerlach,‡ and has given us the latest and most minute investigations in this field.

* * * * * *

In order to furnish the readers of the JOURNAL with all the data (aside from historical and technical details) contained in M. Ranvier's work, as far as he has published it (two volumes), with the exception of a description of the histology of "the electric organ of the torpedo-fish" (comprising some 132 pp. of the printed work) and of the structure of striated muscular tissue (28 pp.), we will next turn to the subject of nerve degeneration and regeneration.

Degeneration of Nerves.—The loss of excitability after nerve-section is complete in the rabbit, guinea-pig and rat, at the end of forty-eight hours; in the pigeon, at the end of seventy-two hours; in the dog, at the end of four days, and in the frog (in Winter) not till even the *thirtieth* day (Brown-Séquard).§

* "Ueber die Endigung der Muskelnerven;" *Archiv. f. rat. Medicin*, 1863, xviii, 136.

† "Ueber die Endigung der Nerven in den Nervenbügeln der Muskeln;" *Virch. Archiv.*, 1864, xxx, 187.

‡ "Ueber das Verhältniss der nervösen und contractilen Substanz des quergestreiften Muskels;" *Archiv. f. micr. Anat.*, 1876, xiii, 399.

§ "Recherches sur l'Irritabilité Musculaire;" *Bull. de la Soc. Philomath.*, 1847, pp. 74 et 83, and *Jour. de l'Anat. et de la Phys.*, t. ii, 75.

The younger and more vigorous the animal, the sooner the abolition of this excitability occurs; it is more rapid in warm- than in cold-blooded animals. Thus, Longet was wrong in declaring that "constantly its [the nerve's] excitability is wholly extinct *after the fourth day.*"

At the End of Twenty-four Hours.—If a segment of the peripheral end of a rabbit's nerve be examined (in water) twenty-four hours after section, the interannular nuclei are seen to be slightly enlarged, the nucleoli being well marked. The protoplasm which surrounds them is more abundant, being continuous with that which lines Schwann's membrane, which, in turn, has become more apparent throughout the length of the interannular segment. This protoplasmic layer has likewise become enlarged at points corresponding to the incisures of Schmidt, depressing the myelinic cylindro-cones so that the contour of the myelin of each segment is sinuous, which may be traced as a black festoon within the sheath of Schwann.

At the interannular constrictions the myelin is separated a certain distance from the sheath of Schwann which forms the terminal enlargement of the interannular constriction. The axis-cylinder may be indistinctly traced as the clearer central portion of the interior of the tube.

At the End of Fifty Hours.—A segment removed from a nerve at the end of this time after section shows: The nerve has lost its watered-silk appearance. In the rabbit, we know it has lost its physiological excitability. The interannular nuclei are much enlarged, contain larger and better-marked nucleoli, and are no longer applied to the internal surface of the sheath Schwann. The nucleoli are regularly spherical, generally, sometimes presenting certain irregularities to be described when speaking of the histological appearances at a later period after section.

This protoplasm has a very granular appearance, more so than in the normal condition. It also encloses fatty granulations (colored yellowish-brown by the osmic acid), and some-

times, not at all constantly, small drops of myelin (colored bluish-gray by the same reagent).

What change has taken place in the axis-cylinder? In the rabbit—the animal used in all these observations—we are able to recognize, even at *forty* hours after nerve-section, that the interannular nuclei are prominently projecting within the nerve-tubes, and that their surrounding protoplasm fills the rest of the calibre of the tube. Consequently the axis-cylinder is divided at those points. Not only has the protoplasm crowded or absorbed the myelin, but it has attacked the axis-cylinder and divided it. Some hours later, at all events at the end of fifty hours, we can observe that this protoplasm has reached and divided the axis-cylinder at points corresponding to the incisures of Schmidt.

The Axis-cylinder Finally Disappears.—If a peripheral segment of a nerve, which has been divided five days before, be prepared and mounted in a particular manner, microscopical examination would show that certain of the nerve-tubes are deprived of their axes-cylinder. In this transverse section, by elevating or depressing the objective, we are able to distinguish the axis-cylinder at the surface in some tubes, whilst in others it is seen to be deeply situated. That this appearance is due to the fragmentation of the axis-cylinder may be shown by another preparation. Within the nerve-tubes, the contour of which is slightly undulated, which are rose-colored, appear variable-size segments of the axis-cylinder, which are tinted red. These segments are either rectilinear or somewhat looped. The myelinic fragments are not distinguishable in this preparation. In a new preparation we see: The detached interannular nuclei, spherical in shape, colored red, and containing a well-marked nucleolus; the rose-tinted granular protoplasm; the yellow-colored, irregular fragments of myelin; and, within the latter, rose-colored segments of the axis-cylinder. We perceive that the axis-cylinder fragments are *completely* enveloped by the segments of myelin, even their extremities. This is due to the

elasticity of the axis-cylinder, whereby its extremities are within its envelope, and the sides of the latter coalesce to form the rounded ends of myelin which are seen. Laying aside the consideration of the changes occurring in the axis-cylinder for awhile, let us investigate the alterations which are taking place, *pari passu*, in the other structures of the tubes.

The fourth day after section, in the rabbit, rat, guinea-pig and pigeon, the protoplasm has become increased, and contains a considerable number of globules of myelin. A new phenomenon now commences, the multiplication of the interannular nuclei. It begins in the nerves of the animals just mentioned toward the fifth day. Now, in the proper preparation, we are able to distinguish five or more successive stages of this phenomenon. In the first we recognize that the nucleus is simply enlarged and contains a very large nucleolus. In the second the nucleus is still larger, and the nucleolus is in the form of a purse (*bissac*). In the third stage the nucleus is more voluminous, and contains two nucleoli, more or less separated. In the fourth the nucleus itself, which encloses two nucleoli, takes the form of a purse. Sometimes, instead of possessing a depression on each side like an old-fashioned purse, there may be a slight depression on one side, or the same may be deeper, as if cut with a sharp instrument. In the fifth stage two nuclei are seen near each other, each possessing a nucleolus. The nuclei are smaller than those seen in the other stages. It is evident that the original nucleolus first becomes divided, then the nucleus, at first presenting a depression at its centre, finally separates into two nuclei of new formation. In a more advanced stage these new nuclei have each divided, and we can see four nuclei, each with a nucleolus, side by side, slightly separated or not by protoplasm. Each nucleus always preserves a rounded form in this degeneration. That there is really a multiplication of nuclei instead of bringing to view normally-existing nuclei (obscured by the myelin) by the resorption of the myelin, as Schiff held, may be demonstrated by an hourly, as it were, examination, for two or

three days, of a frog's pneumogastric nerve, which had been divided twenty-five to thirty days previous (corresponding to the fifth day of degeneration in the nerves of the rabbit or rat).

Course from the Fourth to the Twenty-fifth Day.—After the fourth day the increase of protoplasm, multiplication of nuclei, and segmentation of the myelin into smaller globules continue. At a later period, which cannot be precisely determined, the finely-segmentated myelin accumulates at certain points of the nerve-tube, and the nuclei multiply. The tube is enlarged at the points of accumulated myelin; elsewhere it is turned upon itself and its calibre is filled by elongated nuclei, arranged in series, and by the protoplasm, which, from the eleventh to the twentieth day, shows longitudinal striæ, due to a special arrangement of this protoplasm within the sheath of Schwann. The nuclei are separated from each other by a smaller or larger quantity of myelinic globules. This separation of the nuclei and the interposition of the myelin-globules is probably due to ameboid movements of the protoplasm.

From the fifteenth to the twenty-fifth day, rounded or fusiform masses of myelin, with two *fringed* ends, may be seen.

From the twentieth to the seventy-second day, the phenomena just described progress very slowly. During this period the nerve-tubes are not larger than normal; some are even more slender.

As in the interannular protoplasm, so, too, there is an infiltration of fat-granules into the protoplasm of the connective-tissue cells of the perifascicular sheath, of the endothelial cells of the laminated sheath, and blood vessels of the nerve.

Evidently this so-called degeneration is improperly named. Instead of being a passive or degenerative process, it is *active*. No one would think of calling osteitis a passive phenomenon. Nevertheless the histological sequences are the same in this so-called degeneration of nerves as in osteitis. The increase of protoplasm, swelling of the interannular nucleus and its multiplication, and the subsequent division of the axis-cylinder at various points within the interannular segment, is a sequence of

events which shows the process to be one of activity. The axis-cylinder is divided and absorbed as a consequence of the preceding events; it is not itself a foreign body, as it were, developing activity.

Changes in the Central and Peripheral Bulbs.—Heretofore we have been limited to the examination of a segment excised from the peripheral portion of the divided nerve at a short distance posterior to the *peripheral bulb* (*bourgeon*), as we may designate the ultimate proximal peripheral end for convenience's sake. We may also call the immediate extremity of the central end, *the central bulb*. The morphological changes which occur in these bulbs are as follows:

The division of a nerve gives rise to a slight effusion of blood and myelin. Vascular hæmostasis, and slight inflammation, with oozing of leucocytes about the ends of the nerve, immediately follow. Then there is swelling of the tubes, due to absorption of the surrounding plasma; the latter distends Schwann's sheath and expels the myelin, which becomes diffused between the nerve-tubes. All this occurs on the first or second day after section.

At the beginning of the fourth day the central and peripheral ends are slightly swollen, and rose-colored, due to the effusion of red blood-corpuscles and congestion. The enlargements at these ends form the *terminal bulbs*, and are caused by a swelling of the myelin, and the presence of a large quantity of lymphatic cells charged with globules of myelin and red blood-corpuscles.

Between the third and twelfth days a special preparation of these bulbs would enable us to see:

In the Central Bulb.—The axis-cylinder, in the majority of the nerve-tubes, so hypertrophied as to completely occupy, for a considerable length of the tube, the whole calibre of Schwann's sheath.

The longitudinal striation of the axis-cylinder more distinct than normal.

At certain points, groups of fatty granules or globules of myelin between the axis-cylinder and Schwann's sheath.

At certain other points complete preservation of the myelin. In tinted preparations, elongated and flattened nuclei, enclosed within a group of small fat-granules. These granular groups correspond to lymphatic cells, since the latter are found in abundance about the extremities of the divided nerve, and, having absorbed a quantity of fatty granules and myelin-globules, they insinuate themselves between Schwann's sheath and the axis-cylinder, penetrating the nerve-tubes to a greater or lesser distance. Arrived here, they gradually absorb the surrounding myelin. Red blood-globules may also be found within the nerve-tubes. They reach the interior of the latter by passively flowing, after having escaped from the vessels divided on section of nerve, with the plasma to the space between Schwann's sheath and the axis-cylinder, now left gaping since the myelin has escaped, and they attain a certain height within the tubes. The progress of the development of these phenomena is irregular, by no means uniform in each tube. Finally, the lymphatic cells which have wandered within the nerve-tubes of the central bulb, after having attacked the isolated globules of myelin, then the myelinic layer, subsequently attack the axis-cylinder itself. The latter disappears in the immediate vicinity of the divided end, *but a little above this it is constantly found*. These changes in the nerve-tubes of the central bulb extend in some as far as the first annular constriction, in others not as far. In the latter case a portion of the interannular segment, above the point of section, is preserved in its normal condition. In certain cases, again, these alterations may even extend beyond the first annular constriction; and these changes consist in that the interannular segment, situated above the first constriction, instead of containing a single nucleus, possesses several, which are imbedded in common protoplasmic layer, disposed between the myelin and Schwann's sheath.

In the Peripheral Bulb.—A similar investigation of the nerve-tubes of the peripheral bulb demonstrates changes analogous to those described, with this difference, *the axes-cylinder disappear.*

Toward the twelfth day, the myelin, having become granular, has escaped from the patulous Schwann's sheath for quite a distance, so that the degenerated nerve-tubes only here and there contain globules of myelin, and are almost uniformly constituted by their vacant Schwann's sheath, which is turned back upon itself.

Such is the condition in which the different parts of the nerve-tube are found when regeneration commences. These changes invade the sensory as well as the motor nerves.

Regeneration of Nerves.—The process of nerve regeneration is begun, in the rabbit, about the twentieth day. As we have already seen that the axes-cylinder remain intact in the nerve-tubes of the central bulbs, the process of regeneration essentially consists in the prolongation of these axes-cylinder from the central to the peripheral bulbs, thence between or within the sheaths of Schwann, remaining in the peripheral nerve segment, to its ultimate extremities. Eventually these axes-cylinder acquire their medullary sheaths, becoming perfect myelinic nerve-tubes of new formation.

Special examination of the central and peripheral bulbs, the peripheral segment of the nerve, and the cicatricial segment, would demonstrate these respective stages.

Central Bulb.—Proper preparations show the following between the twentieth and the one hundred and sixtieth days:

1. From a primitive nerve-tube, with a slightly swollen extremity, there shoots forward a tube with a delicate sheath of myelin, characterized, nevertheless, by annular constrictions and interannular nuclei. Between this newly-formed tube and the old Schwann's sheath which covers it, a granular mass with large nuclei is distinguished.

2. From the terminal bulb of a normal nerve-tube an axis-cylinder becomes disengaged; at a short distance it divides into

two or more parts, each of which becomes a myelinic nerve-tube.

3. From the extremity of a primitive nerve-tube several delicate, but perfect, myelinic nerve-tubes spring; in their onward course they entwine one another.

4. From an old nerve-tube a smaller myelinic nerve-tube departs, around which a still more delicate nerve-tube is entwined; the latter arises at a higher point than the original tube.

5. From an original nerve-tube bulb a more delicate myelinic nerve-tube is continued a certain distance, where it acquires abruptly the size of the parent tube, all being contained within an unbroken sheath of Schwann; the more delicate part is really an interannular segment, recognized by its central nucleus.

6. This is the commonest disposition: From the extremity of an original myelinic nerve-tube a slender tube shoots forward a certain distance, then divides into two tubes of almost equal size with itself; after a short course, each of the latter divides; this division continues, so we may further on see a single Schwann's sheath enclose eight or more tubes. Schwann's sheath is recognized by the globules of myelin found at irregular distances.*

Cicatricial Segment.—This is seen to be composed of a very considerable number of small nerve fasciculi. They contain neither myelinic nor fatty globules. They are enveloped by a very delicate sheath, carpeted on its under surface by endothelial cells; it is, in fact, analogous to Henle's sheath. These fasciculi contain both myelinic and non-myelinic tubes, their relative number varying. Certain fasciculi contain non-myelinic tubes exclusively. These differences may be accounted for by the *kind* of nerve, and *time* of observation.

*Regarding the formation of nerve-cells (bi- or poly-polar) within the central bulb, which S. Mayer (*Archiv. f. Psychiatrie*, 1876, p. 430) claims to take place, I will say that in the pneumogastric nerve, sixty days after section, I have observed, in the central bulb, cicatricial segment, and peripheral bulb, refracting homogeneous globes, more or less deeply tinted gray by the osmic acid, usually bi-polar, and seemingly placed over a non-myelinic nerve-tube. But, inasmuch as I have never been able to detect a nucleus within them, they should not be considered as nerve-cells.

The course of the tubes is not straight in all, some taking an oblique or almost perpendicular direction, others intercrossing in an irregular manner.

Peripheral Segment.—If examined at the end of sixty or seventy days following section of a pneumogastric nerve, fixed with osmic acid, and disassociated with care, we should see a large number of pale nerve-tubes, each furnished with nuclei here and there. Other fibres, presenting globules of myelin within their sheaths, are also seen. Both arise from myelinic tubes, possess nuclei, and present a longitudinal striation. Besides these, a third species exists, possessing globules of myelin here and there, and within their interior a regenerated nerve-tube is to be distinguished. The latter is very delicate and presents a bluish-gray appearance, due to osmic acid staining of its myelin. It possesses perfectly clear annular constrictions, but they are nearer each other than normally. Each of the latter has its central nucleus. In one of these small tubes, the diameter of which is $\frac{1}{10000}$ MM, the annular constrictions are ranged at a distance of $\frac{1}{10000}$ MM. In some original tubes, two, four or more newly-formed tubes may be seen. A fourth species is found, namely: a nerve-tube, either free or contained within an original Schwann's sheath, which at a certain point loses its myelin, is continued as a non-myelinic tube, then abruptly retakes its myelinic sheath. Such are the principal types met with in the peripheral segment.

From the hundredth to the hundred and sixtieth day (even at the sixtieth day, sometimes) we may see myelinic nerve-tubes of new formation within the peripheral segment, which are perfectly free, not enveloped by old sheaths of Schwann. This species is often accompanied by a turning non-myelinic tube.

Mode of Union of Both Ends.—The delicate fasciculi of the cicatricial segment are prolonged in full calibre from the original nerve-tubes of the central bulb. Each nerve-tube of the cicatricial segment is surrounded, not by Schwann's sheath, but is bathed in a plasma in which various cells float. It is probable

that this plasma-sheath is formed at the expense of lymphatic and connective cells of the cicatricial tissue.

The point of soldering of the cicatricial segment and peripheral bulb can be distinguished by the sheaths of Schwann, containing ovoid masses of myelin and fatty granules. Besides, the degenerated nerve-tubes of the peripheral segment present very delicate fatty granules throughout their whole length.

Within these old sheaths of Schwann the newly-formed nerve-tubes are seen to be prolonged from the cicatricial tubes. Thus comes the conclusion that the newly-formed nerve-tubes seen within the peripheral bulb and segment take their origin from the central segment.

AN INQUIRY INTO THE SOURCE AND CAUSE OF SECONDARY OR
RECURRENT HEMORRHAGE, AFTER LIGATION OF
ARTERIES FOR ANEURISM.*

BY CHARLES C. F. GAY, M. D.

Surgeon to the Buffalo General Hospital.

The subject to which your attention, this evening, is invited, is an important one. I cannot conceive of any subject which is invested with greater surgical interest than an "Inquiry into the source and cause of secondary or recurrent hemorrhage after ligation of arteries for aneurism." I am sure no one could have failed to observe the numerous reports of cases of aneurism which are scattered all through the pages of our home and foreign medical journals. There is one special fact connected with aneurism which gives to it peculiar interest and importance, without which the subject would be divested of much of its value; it is the fact of the liability, and, indeed, certainty of the supervention of secondary hemorrhage after ligation, by which, without warning, life is put in jeopardy. Lister has labored for two full years to prepare and perfect the so-called chromic cat-gut ligature. Richard Barwell has written and published a book, the chief aim and object of which seems to have been to describe the preparation and efficiency of his ox-aortic flat

*A paper read Oct. 2, 1882, before the Buffalo Medical and Surgical Association.

ligature. By the employment of these ligatures, or either one of them, these gentlemen hope to prevent secondary hemorrhage after ligation of arteries.

It is quite patent, therefore, that a subject which so largely engrosses the time of such men as these, possesses very great surgical interest and importance and is altogether worthy of your attention and study.

If one has had much occasion to witness hemorrhages following ligation for aneurism, and has bestowed some considerable thought upon its origin, he will be led to ask: Whence originates the hemorrhage? Whence its source and what its cause?

Let us briefly interrogate some of our authors, and see what responses may be obtained:

"I think that the presence of a collateral branch in close proximity to the *distal* side of the ligature, more especially if it be one that serves to carry on the anastomosing circulation, will be found to have a decided tendency to prevent the occlusion of the distal end of the artery, and thus to favor the occurrence of secondary hemorrhage."—ERICHSEN.

"The bleeding often supervenes without any assignable cause, generally suddenly and unexpectedly. * * * When proceeding from a large vessel it may prove fatal in a few minutes, in the same manner as when the bleeding is primary. The scarlet hue of the blood always denotes its source."—GROSS.

"The sloughing condition of the soft parts, and an imperfect thrombus, are concerned in determining the hemorrhage, * * * and these depend upon a defective state of the blood and an imperfect nutrition of the tissues about the wound."—AGNEW.

"From ulceration and sloughing of an artery spreading through the arterial tunics, imperfect closure of arteries, when a ligature separates through the influence of a diseased state of the artery."—DRUETT.

"Excessive accumulation of blood determines rupture of the capillaries,"—ROKITANSKY.

Guthrie and Porter affirm that the blood in the great majority of instances comes from the distal, and not from the proximal side of the wound.

Lister and Barwell believe secondary hemorrhage is entirely owing to the character and application of the ligature.

Authors are all in accord in assigning one or more of the following circumstances as conditions precedent to the occurrence of secondary hemorrhage.

- 1st. Faulty structure of the ligature.
- 2d. Imperfect application of the ligature.
- 3d. Diseased state of the coats of the artery.
- 4th. Irritability of the arterial system.

It is my purpose to make inquiry into some of these conditions, without, however, following the order in which they are herein named—but rather to consider them grouped together—and to add thereto some remarks upon cases, the history and course of which I have clinically observed and noted. Since Barwell and Lister attribute hemorrhage to the imperfect application and faulty construction of the ligatures, it will not be regarded, I trust, an unwarrantable digression, should I say something concerning these ligatures.

Barwell's flat ligature is prepared from the aorta of the ox in a fresh condition and placed in a three per cent. solution of carbolic acid. It is believed by the author when thus prepared to be hemorrhage-proof. He says: "To make out of the aorta a ligature, it is only necessary to peel away the outer cellular coats, and then, with a pair of scissors, skillfully to cut the middle and outer coats spirally round and round, taking care to keep the breadth equable." This flat ligature does not divide the arterial coats, but leaves the vessel entire, secure he says, therefore, from secondary hemorrhage: "By its use no excuse or occasion for secondary hemorrhage is given." Thus we recognize the above statement as the expression of a belief that hemorrhage is caused wholly and alone by rupture of the arterial tunics. My present impression is that Barwell has not

yet reported a sufficient number of successful cases fully to establish the claim, for his ligature, of infallibility.

Lister's chromic cat-gut ligature—which is really not cat-gut at all, but is made, as all such ligatures are, from the small intestines of the sheep, for an account of the preparation of which I refer you to the *London Lancet* for April, 1881, p. 296—is much extolled by Lister. By its use Lister hoped to eliminate all risk of secondary hemorrhage. It is so well prepared that the ligation of arteries may be done under aseptic and antiseptic precautions. But I have noticed that this ligature failed in the hands of Bartleet, who reports a case to the British Medical Association at its recent meeting, an account of which may be found published in the *New York Medical Record* for Sept. 9, 1882. The wound, after ligating the common femoral trunk, did not remain aseptic and secondary hemorrhage came on. Still later, Sept. 23d, another failure of the cat-gut ligature is reported. Autopsy made the startling revelation that the sutures were untied. Quite recently I ligated the superficial femoral artery for aneurism, applied the tourniquet and instructed my patient how to turn the screw in case there should be any bleeding. On the ninth day, suddenly, there was a profuse hemorrhage, and by the time the patient had tightened the tourniquet, the bed clothes and blanched appearance of the patient's face denoted much loss of blood.

Getting to the patient as soon as possible, I laid open the wound, sponged it out, lifted up the artery by making traction with the ligature, and made a thorough and careful examination of the artery and its surroundings. The artery showed a vermilion border or ring upon either side the ligature; it was firmly tied, indeed, so little change was manifest since the ligature was applied that one could not avoid pronouncing its application faultless, therefore it was not re-inforced by another.

There was no further hemorrhage after removal of the tourniquet. Fruitless search was made for the source of the hemorrhage. I had good opportunity thoroughly to examine the

wound and the ligated artery. There was no appearance upon the distal, and none, of course, upon the proximal side of the ligature, of inflammatory softening or fatty degeneration of tissue nor atrophy. The arterial tissue showed great resistance to destructive elements. The evidence which I expected to find of faulty ligation, rupture of the arterial tunics or softening, was absent, hence the conclusion, that the source of hemorrhage must be sought for elsewhere or otherwise explained. The wound was dressed by placing over it a compress and bandage. There was no subsequent hemorrhage. I am unable to say whether it ceased spontaneously or from pressure of the instrument, but am inclined to believe it was the former, since there was no recurrence of it, when pressure was removed. The ligature came away on the twenty-first day. This by no means is a phenomenal, but rather a representative case. I have notes of others, one only of which I will take time to notice. It was a case in which secondary hemorrhage occurred nine days after ligature was placed around the subclavian artery for axillary aneurism. The aneurismal sac had burst, immediately after which I tore the sac freely open so as to enable the hand to be introduced for the purpose of compressing the axillary artery. I then proceeded to ligate the artery. There were, consequently, two wounds: one made by ligating the artery, the other by rupture of the sac. Hemorrhage occurred in the latter wound and was arrested, presumably, by plugging and compress, but possibly the arrest was spontaneous.

This, like the former case, recovered without further ligation. The ligatures, employed in both cases, were made of silken thread; they were large and rendered aseptic by being soaked in a solution of carbolic acid. It is a noteworthy fact that the hemorrhage did not occur in the wound where the ligature was applied, but in the wound remote from it, made by rupture of the sac. I cannot attempt any explanation of this.

The same degenerative process which affects arterial tissues also implicates the veins in close proximity, and as the latter are

less resistant to destructive, or degenerative processes, it would not be a far-fetched conclusion to hold them accountable for the hemorrhage; and since it is shown that hemorrhage is suppressed by compress without re-deligation, we are nearly or quite able to reach the conclusion that the veins and not the arteries may be held accountable in some of these cases.

I think I do not expose myself to adverse criticism by affirming that secondary hemorrhage most often occurs on or about the ninth day. Is not this a fact of some significance? An answer to this query may throw some light upon our subject and assist in some measure to resolve our doubts. The pathologist, Rokistansky, above quoted, states that excessive accumulation of blood determines rupture of the capillaries. There must needs be excessive accumulation of blood at one place and the want of it at another, after deligation of an artery, in continuity. The condition of the parts in close proximity to the ligated vessel may be likened to an obstructed water course. Hydrostatic pressure—from a large accumulation of fluid—exerted for a long time in one direction, forces at length a breach, and the obstruction is overcome.

The overflow at first, like a flood, soon subsides, and the stream returns to its normal channel. After ligation in continuity, the blood is dammed up; the circulation is obstructed; the relation of the vessels and their contents is interrupted but not destroyed; the limb does not perish because nourished by the lesser circulation carried on by the anastomotic or collateral vessels, until the larger and normal circulation, which requires a much longer time than the former, has become fully established. Now the capillaries, or the veins, or the degenerate artery upon the distal side gives way and no longer acts as a barrier against the onset of a profuse hemorrhage. The collateral or temporary circulation may require no more than a few hours to form, but the normal and permanent circulation requires several days, it may be, for its establishment, and when the transposition occurs, the danger from hemorrhage arises. It

is a law of nature, applicable to all fluid bodies, that they seek, and endeavor to maintain, their natural channels; if turned aside, for a time, by artificial means, they surely again return to the channels designed for their onward, steady flow.

The tendency of the blood current is, I believe, at first, to pass through arterial anastomoses rather than toward the capillaries. In St. Bartholomew's Hospital Reports, I find the following experiment, reported by William Harrison Cripps. He says: "If water be injected into the common iliac artery of a rabbit it will circulate through the capillaries, returning by the vein. If the external iliac and the superficial femoral be now tied, the water will still return by the vein, only much more slowly. If the femoral artery be now divided below the ligature and water still injected by the common iliac, it will be found that a greater quantity of the water will return through the cut (lower) end of the femoral than by the iliac vein." This experiment shows, at least in the case of the rabbit, that even with the iliac vein open, less resistance is afforded by the anastomoses of the arteries than is afforded by the capillaries. This writer has collected fifty-three cases from various sources and classified them according to the plan of treatment. The result of treatment is thus shown:

			Died.	Recoveries.
Ligation of external iliac,	-	-	12	2
Amputation,	-	-	2	3
Re-opening wound,	-	-	7	5
Pressure and bandaging,	-	-	3	12
No treatment,	-	-	4	0
Total,	-	-		53

The percentage of recoveries, as here shown, is greatly in favor of suppressing hemorrhage by pressure and bandaging. Religation, being found unnecessary to control hemorrhage, constitutes in itself, I think, a partial concession to the theory that the hemorrhage is venous in these cases, and not arterial; or, if not venous, then *arterial from rupture of a branch of the*

anastomotic system of vessels, from which the blood derives its scarlet hue.

Unhappily, autopsies throw but little light upon our subject. Barwell reports one. The case was where death followed in two months after the ligation of the carotid artery, but as no secondary hemorrhage is reported during its treatment, it possesses only negative value in this connection, and is now only referred to here to show the condition of the vessels which have been cut through by the ligature. He says: "The artery remained open below the seat of ligatures to within half an inch of its origin, where it was sealed by a plug of coagulum. Above, the vessel was likewise patent as far as the bifurcation, where it was closed by the coagulum, which filled the contracted aneurismal sac. The portion of artery below the ligature contained pus, mixed with what appeared to be broken-down clot, while the part above the ligature was empty. The vein was closed at a point even with the aneurism by a thin plug of bright, golden-colored lymph, while it was plugged below by coagulum." As there is no report of secondary hemorrhage, the conclusion is that we need not always expect it to occur at the place of ligation after or even before the artery is divided.

The natural and legitimate inference, to be drawn from the foregoing, is that our knowledge concerning the source and cause of secondary hemorrhage is at present in a transitional state. One fact, however, is well established and settled: We have demonstrable evidence that the bleeding does not always occur at the place where the ligature is applied. In the main, when we attempt to search for the source and cause of secondary hemorrhage, we grope our way in the dark; we have not sufficient light; we are left in doubt, and labor under difficulties like unto those who make fruitless explorations in search of the source of the Nile. Authors are less full and explicit in their discussion of this theme than we could wish. Says Gross: "The bleeding supervenes often without any assignable cause." The subject is open for discussion, and invites further research.

Its practical bearings ought not to be lost sight of, since prompt and proper treatment—it may be—by plugging and bandaging, may surely save life, while religation nearer the trunk might as surely destroy it. The efficacy of treatment, therefore, depends upon the knowledge we have at our instant command of the true source and cause of all hemorrhages after deligation of arteries for aneurism.

Selections.

NARCOTISM IN INFANCY.

Dr. H. Cripps Lawrence says in the *Practitioner* :

Given a healthy child to start with certain results will follow the administration of narcotics, with an equally certain regularity.

1. In the early administration of a narcotic, more or less diversified, according to the temperament of the infant, a modified degree of excitement will supervene, to be followed by sleep ; and this favorable condition of things may recur for a period varying from a few days to a week or two. If, however, the repetition of the narcotic be at all frequent, or if it be exhibited in any but a very small amount, this period of favorable narcosis will be proportionately diminished, and the chances of its lethal effect increased.

2. In some infants the effects of the narcotic will be to speedily constipate, for, as in the adult, so in the infant, a narcotic lessens at once the secretions and movements of the stomach and intestines, and consequently digestion becomes arrested.

There is, however, a class of cases met with in infancy, wherein infants, the subject of imperfect digestion associated with colic, become for a time benefited by a moderate amount of narcotic. Here the sedative acts by checking peristalsis, and so enables the food to remain a longer time in contact with the digestive juices, and thus to become more perfectly digested. This con-

dition, however, is more frequent in early childhood than in infancy.

A third and more frequent sign of the administration of a narcotic in the infant is the occurrence, sometimes the concurrence, of diarrhœa and vomiting. When these occur a longer time will elapse than when such conditions are absent, before profound narcosis ensues.

3. In addition to the above, diaphoresis and diuresis may occur, one or both. Either of these may and often will be present in an inverse proportion to the other. The predominance of either will be dependent upon the amount of fluid ingesta, the character of the fluids taken, and the condition of the temperature of the weather present at the time. Obviously, warm weather or an over-heated atmosphere will promote diaphoresis, while cold weather would augment diuresis.

4. The intestinal evacuations soon alter in character, becoming paler and more solid in consistency, diminished in their frequency, and increasingly more and more deficient in bile, accompanied by a change in color, from yellowish-green to verdant green, with or without mucus, and if very constipated, accompanied by streaks of blood, owing to the tenesmus which is associated with the expulsion of the hardened, ill-digested fæces.

5. Another vital symptom, though of later occurrence than the preceding, is marked depression of the vital powers, evidenced by sinking of the anterior fontanelle. This is accompanied by other signs of want of vitality, viz., feebleness of pulse, loss of weight, an earthy complexion, wasting, especially marked in the pinched and anxious expression of the face. By this time the infant alternates between efforts at peevish whimpering and imperfect somnolency.

The pupils will be found, in the earlier stages of narcotism in infancy, to be frequently contracted, but when the stage of fontanelle depression is reached they may contract or dilate, and one pupil may be larger than the other. This condition I believe to be dependent upon variations in the amount of fluid present in the ventricles of the brain.

So soon as this stage is reached, any subsequent dose of a narcotic may prove speedily lethal, and the greatest care and caution become necessary to avert an outward result. It is at this point that I believe the cumulative effect and action of the narcotic assumes a point of much peril to the infant. One of two results may now supervene: either clonic convulsions may set in, though these are not very frequent, or, and much more commonly, profound and perhaps fatal coma.—*Medical and Surgical Reporter*.

FOWLER'S SOLUTION.

BY E. C. SEGUIN.

In this preparation, ℥j contains $\frac{1}{120}$ grain or gm. .0005 of arsenious acid.

Doses as given by authorities on *Materia Medica* and *Therapeutics*:

Stillé and Maisch, *National Dispensatory* (1879), p. 864, state only that the commencing dose is 5 drops (which is too much for some cases).

Stillé—*Therapeutics* (1874), vol. ii, p. 811. "Dose, 5 drops, generally increased to 10 or 20 drops three times a day, largely diluted and taken after meals."

Wood—*Therapeutics* (1880), p. 385. "Average commencing dose is 5 drops in a wine-glassful of water after meals, to be increased." Page 382, "the dose must be steadily increased until œdema or other manifestations betray its decided action." [In chorea.]

Bartholow—*Materia Medica* (1880), p. 124. "Dose, from 2 to 10 minims. In this disease [speaking of chorea] large doses—5 minims *ter in die*—must be given." p. 130 (!).

Rice—*Posological Tables* (1879), p. 45. "The dose is 3 to 10 minims and more, with caution."

Nothnagel and Rossbach—*Arzneimittellehre* (1878), p. 212. "Dose, from 2 to 5 drops three times a day."

Gubler—*Leçons de Thérapeutique* (1877), p. 100. "Dose, 5 to 20 drops per diem."

Doses as given by authorities on Clinical Medicine:

Austin Flint, Sr.—*Practice of Medicine* (1881), p. 811, speaking of the treatment of chorea, says: "Fowler's solution is the most eligible preparation. Commencing with 3 or 4 drops three times daily, the dose should be gradually increased until the characteristic effects are observed."

Nothing is said of the mode of administration, or of the maximal dose. I must confess to a doubt whether this eminent teacher and practitioner does use really efficient doses, for he says, also on p. 811, "of the divers remedies indicated, none can be relied upon for promptly arresting the course of the disease, and it is doubtful if any exert a special curative agency."

C. B. Radcliffe, *Reynold's System of Medicine* [American edition, 1879], vol. i, p. 712, article Chorea, correctly and fully describes the progressive and fearless dosage of this remedy, increased from 5 drops after each meal to saturation of the system. If gastric derangement occurs, he suspends treatment for a while and then goes on. He quotes Dr. Begbie as giving it in the same way, and he has never known it to fail in thirty years.

Meigs and Pepper, *Diseases of Children* (1870), p. 564, quote Radcliffe, and add, "Fowler's solution given in ordinary doses and immediately after eating, and steadily persisted in until some evidence of its constitutional effects are observed."

If these writers correctly express their meaning, simply "persisting" in ordinary doses (5 to 10 drops) is the proper method. But it is by just such a method that chorea may be perpetuated and a belief in the non-efficiency of drugs engendered in the physician's mind.

J. Lewis Smith, *Diseases of Children* (1880), p. 496, recommends equally useless doses of arsenic. "A child of eight years can take 5 drops, diluted in water, three times daily, after eating; and the dose may be increased, if needed, to eight drops."

Hammond, Diseases of the Nervous System (1881), p. 745, correctly describes the arsenical treatment of chorea by giving Fowler's solution *per os*, and by hypodermic injection.

The internal doses he increases by 1 drop every three days, which in my opinion is too slowly. He gives his preference to the hypodermic injections of diluted Fowler's solution in doses varying from 10 to 30 minims. (gm. 0.6 to 1.8.)

Personal experience:

My own experience is in substantial accord with that of Radcliffe and of Begbie, in that I have almost never known arsenic to fail to cure chorea, and often very quickly. I have almost always given Fowler's solution by the stomach in doses ranging from 3 to 30 drops three times a day.

It is exhibited largely diluted with water, usually half a tumblerful or from 3 to 4 ounces (gm. 90 to 120), and given after food, although I am now inclined to think that the importance of this latter caution has been over-estimated, and is not as great as is that of proper dilution.

In children who are delicate and in sensitive adults I sometimes commence with a dose of 2 drops after each meal; more usually, however, with a dose of 5 drops. Each day I add 1 drop; thus: On the first day the patient takes 5 drops three times a day, on the second day 6 drops three times a day, the third day 7 drops three times, and so on.

Usually, when a dose of from 10 to 14 drops three times a day is attained, some arsenical symptoms appear; these are diarrhoea, nausea, vomiting, anorexia, redness and puffiness about the eyes; one of these symptoms or any combination of them. They are not serious, and during their prevalence I have never found albumen in the urine. My practice formerly was to go back to smaller doses when this condition developed and to again increase; but in the last two years I find it more advantageous to withhold all arsenic for forty-eight hours and then resume at the last dose and begin a further increase. A remarkable tolerance is now shown by most patients, even by young

children; and doses of 20, 25, and even 30 drops thrice a day may be reached without a renewal of these symptoms.

I recently had a chronic and relapsing case of hemi-chorea in a girl fourteen years old which resisted doses of 34 drops three times a day, an equivalent of one grain (gm. 0.06) of arsenious acid per diem. My directions as to physical and mental rest were disregarded by parent and patient, and this may account for the failure of the arsenic. Under the use of 2 grains (gm. 0.13) and 3 grains (gm. 0.19) doses of bromide of zinc the movements ceased within a month after the discontinuance of the arsenic.

I have been taught by experience not to expect amelioration of the choreic movements until the toxic effects of arsenic are evident; and in old or relapsing cases, not until the second period of toxic symptoms. I nearly always combine rest, nearly absolute rest in bed, in severe cases, with the arsenical treatment, and, if the patient be wakeful or nervous at night, an occasional bed-time dose of chloral hydrate *per os* or by enema is given.

Simple, acute chorea may often be cured in two weeks' time by this plan, in positive contradiction to the too prevalent notions of self-limitation of chorea and skepticism as to the efficacy of drugs in this disease.

As regards possible ill-effects from this arsenical treatment, I would repeat that, though I have examined the urine of many patients at the period of saturation by arsenic, I have never found albumen or tube-casts. Stomatitis I have seen but once, in the case of a physician's son, whose chorea was very rapidly and permanently cured by moderate doses (about 18 drops three times a day). Cutaneous symptoms I have never met with; and the gastro-intestinal irritation has never been serious or permanent.

My experience with the hypodermic injection of Fowler's solution is more limited. I have made use of it in chronic chorea, and in local choreiform affection, and I would agree with Dr.

Hammond in his statement that we relatively obtain less constitutional disturbance and more curative effect from this method. —*Transactions of the Medical Society of the State of New York for 1882.*

INEBRIETY AND THE USE OF OPIUM.

In a review of thirty-five cases of *inebriety* and the use of opium, admitted to Walnut Lodge, Hartford, Conn., during the year 1878, discharged within the year, and followed up for four and a half years since, Dr. Crothers specially notes the following facts: Heredity was a prominent factor in causation, traceable in nearly all the cases. In many there was also a special exciting cause in the shape of mental or bodily strain. In a large proportion of cases, when inebriety begins it follows a more or less regular order or course, which can be traced and anticipated in study and treatment. The essentials of treatment are, briefly, the removal of all exciting causes; building up the general strength and vigor of the organism, physically and morally; the withholding of alcohol as absolutely as possible, all restraint being adapted to the special needs of each case; these means being used for periods of not less than from one to three years. The results, after treatment in the asylum for from thirty-four days to six months, averaging four months to each patient, have been as follows: *Nine*, including two who have died, remained temperate. *Five* relapsed once, but are now temperate. *Five* relapsed twice or more, at long intervals, and are now well. *Seven* relapsed, and are still drinking. *Four* relapsed, and died or became insane. *One* died under treatment. In the remaining *four* of the thirty-five cases no history has been obtained since they were discharged "greatly benefited." Dr. Crothers states that all these patients had developed a low grade of chronicity, and had exhausted every means of treatment before coming to the asylum as a last resort. He thinks that the results of treatment to-day, with the worst cases and the crudest means

and methods of restoration, only faintly indicate the possibility of cure in the future. The restoration of seven in thirty-one cases, after a period of four years and more, is an unmistakable sign of the eminent curability of inebriety, with better means and larger knowledge.—*N. Y. Med. Jour. and Obst. Review.*

TRAUMATIC TETANUS AND DEATH FROM VACCINATION.

Dr. Bates, of Columbia, reported a case of tetanus from vaccination, at the meeting of the South Carolina Medical Association (*Medical News*). Ben. Jones, a mulatto, was vaccinated, Feb. 9th, on the arm, with carefully-selected humanized virus. He was again seen March 8th, when he had ordinary symptoms of tetanus. Was examined next day by Drs. Talley and Howe. A most careful inquiry into the history of the case, and a searching examination of the body, revealed nothing to cause it, except a small, healthy-looking, painless ulcer at the spot where vaccination had been performed a month before. The disease advanced and caused death in fifteen days, in spite of careful treatment.

FLOATING KIDNEYS.

Skorczewsky, at a watering-place in Galicia, found 32 females and 3 males with floating kidney, out of 1030 females and 392 males examined. In 19 the right organ and in 11 the left was affected. In 5 (pluriparæ) both organs floated. S. thinks the affection far more common than supposed and that physicians overlook its existence. None of the 35 above mentioned were sent on account of the kidneys. The condition depends, he thinks, chiefly upon disappearance of circumrenal fat, atony of tissues from acute fevers, and pressure of hypertrophied abdominal viscera. Co-existence with malarial hypertrophy of spleen was often observed (most commonly in left displacement) and the author strongly recommends examination of kidneys in all malarial affections.—*London Med. Rec.*

VARICOSE VEINS.

The patient was an old man with beautiful examples in both legs. Since in the right leg there existed some phlebitis, it was not operated on, in the hopes that the inflammation might prove sufficient to obliterate the veins. On the right side the operation was done, without an anæsthetic, as follows: A piece of carbolized cat-gut, carried in a large curved needle, was passed through the skin about half an inch from the course of the vein and brought out at an equal distance on the other side. In this stitch the cat-gut passed under the vein. The needle is then re-introduced at the place of its exit and carried backwards between the vein and the skin, and made to emerge as near as possible to the place where it entered. The cat-gut is then firmly tied and the ends cut off, so that if possible the knot shall disappear under the skin. A dull needle is preferred by the operator, as the point is not so likely to emerge at an undesired place. The spray is used and a complete Lister dressing placed over the site of the operation. In this case the veins were tied in four places, one of which was above the knee, and the patient kept quiet in bed for a few days. It is claimed that this method has been very successful and the dangers are far less than by any other operation. It certainly has simplicity and ease of accomplishment to recommend it.—*The St. Louis Med. and Surg. Jour.*

KOCH ON DISINFECTANTS.

From careful investigations, Koch concludes that the only certain disinfectants are chlorine, bromine and corrosive sublimate, and that to arrest development, only corrosive sublimate, certain ethereal oils, thymol and allyl-alcohol are available. Bromine vapors are recommended for confined spaces. Chlorine is a little less satisfactory, but more so than formerly supposed. In all cases where neither heat nor gases are available, corrosive sublimate, and indeed all the mercurial salts are recommended.

A solution of 1 per 1,000 of the mercuric chloride, sulphate or nitrate, killed the resting spores in ten minutes; and indeed simple moistening of the earth containing the spores with this solution is sufficient to arrest their power of development. Solutions of 1 in 1,000 to 1 in 15,000 are sufficient to kill micro-organisms. The poisonous action of such diluted solutions may be disregarded. The cost also is far below that of carbolic acid.—*London Medical Record*, Aug. 15th.

THE ODOR OF IODOFORM.

Having tried nearly all the devices that have been suggested for mitigating or disguising the odor of iodoform, and found them all of little or no avail, we have lately come nearer to the object by using oil of eucalyptus, according to the following formula :

℞ Pulv. iodoform., $\frac{3}{4}$ ss. ;

Ol. eucalypti, f $\frac{3}{4}$ ss. ;

Vaselin., $\frac{3}{4}$ iv.

M., fiat unguentum.

We do not remember to have seen any account of the oil having been used for this purpose by others. The ointment thus prepared is not without odor, but the odor is not that of iodoform. —*N. Y. Med. Jour. and Obst. Rev.*

HYPOPHOSPHITES IN PHTHISIS PULMONALIS.

Thorowgood claims a very high value in this affection for the hypophosphites, having seen better results from them than from cod oil and iron. In caseous and scrofulous pneumonia they often act like a charm. He has always found them useful and never harmful, and urges a more extensive employment of them. In using, first see that no renal or hepatic complication exists, and then test the remedy, seeing that it ignites readily when heated. Give in water or syrup. A little carb. soda may occasionally be advantageously added.—*Brit. Med. Journal*.

A FISTULA KNIFE.

The instrument in use here seems worthy of notice. It consists, simply, of an ordinary curved bistoury, mounted on a fixed handle, the point of the bistoury being prolonged in the form of a probe to the length of three or more inches. The method of using it is, the patient being in position, the left index finger, oiled, is inserted in the bowel, the probe end of the instrument passed into the sinus, the internal opening found, and the point of the instrument carried outside of the sphincter. To complete the operation, the knife is advanced and the band severed. The advantage being, that with one instrument, and at a single movement, the operation is done.—*The St. Louis Med. and Surg. Jour.*

TITLES OF SPECIALISTS.

The following "Report of the Judicial Council of the American Medical Association" forms a part of the By-Laws of the Michigan State Medical Society:

"The acceptance of the honorable title" (doctor) "is presumptive evidence to the community that the man accepting it is ready to attend practically to any and all duties which it implies. As all special practice is simply a self-imposed limitation of the duties implied in the general title of Doctor, it should be indicated, not by special or qualifying titles, such as Oculist, Gynæcologist, etc., nor by any positive setting forth of qualifications, but by a simple, honest notice, appended to the ordinary card of the general practitioner, saying, 'practice limited to diseases of the eye or ear,' or 'to diseases peculiar to women,' or 'to midwifery exclusively,' as the case may be."—*Maryland Medical Journal.*

AMUSSAT'S LAXATIVE SYRUP.

In the *Gazette Hebdomadaire*, 1882, No. 22 (*Lyon Medical*, June 4, 1882), we find the following formula for the preparation of the "sirop laxatif d'Amussat," or "sirop de suc d'herbes":

Rasped guaiacum wood,
Chicory root,
Burdock root,
Waterdock root (*racine de patience*),
Fumitory tops,
Tops of *viola tricolor arvensis* (*pensée sauvage*), each,
100 grammes,
Senna leaves, 500 grammes.

Bruise the materials, and infuse for twelve hours with five kilogrammes of boiling water. Strain, and make a second infusion with three kilogrammes of water. Strain under pressure, filter through paper, and make, with honey and sugar, each, three kilogrammes, a syrup, which is also to be filtered through paper, and which should be of the density of 31° Baumé. Dose, one to two tablespoonfuls a day.—*N.Y. Med. Jour. and Obst. Rev.*

Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Regular Meeting, October 2d, 1882.

President, Dr. A. R. Davidson, in the Chair. Dr. C. M. Daniels, Secretary.

Present—Drs. Coakley, Mynter, Brecht, Hopkins, Johnson, Burghardt, Hartwig, Dagenais, Dorland, Runner, Moody, Cronyn, Van Peyma, and, by invitation, Drs. Tremaine, Potter, Frank, Fell, Heath, Elwood, Messrs. Webster and Marcellus.

Applications for membership received from Drs. W. S. Tremaine, W. H. Heath and W. W. Potter, who were duly elected.

Essay—By Dr. C. C. F. Gay; subject: "An inquiry into the source and cause of secondary or recurrent hemorrhage after ligation of arteries for aneurism." The paper appears in the present number of the BUFFALO MEDICAL AND SURGICAL JOURNAL.

Discussion—Dr. Tremaine thanked the essayist for his interesting paper. The subject had always been one of deep interest

to practical surgeons. In a certain proportion of cases of ligation of arteries for aneurism, secondary hemorrhage did take place, and it was generally due to ulceration of the coats of the vessel, caused by the ligature. Now, if we can find a ligature that will excite sufficient irritation to induce proliferation of the cells of the intima and resulting newly-formed tissue to occlude the lumen of the vessel, and without producing suppuration and ulceration, hemorrhage could not take place at or near the point at which the ligature was applied; in this respect there was, probably, a great advantage in the antiseptic cat-gut ligature of Mr. Lister. As to whether the internal and middle coats of the artery should be divided, or simply pressure enough exerted by the ligature to close the lumen of the vessel sufficiently long to cause an organizable clot to be formed, had, of late, been much debated among surgeons. Mr. Barwell had introduced, and used with success, a flat, tape-like ligature, prepared from the fresh aorta of the ox, with a view to carry out the latter idea. The question was one that experiment alone could solve. When the ordinary ligature was applied sufficiently tight to cause division of the middle and internal coats, the intima curled up and assisted in the formation of the conical, fibrinous clot, which he believed gave additional security; but examination of morbid specimens had shown that even then this clot did not always form, indeed, he (the speaker) had an opportunity of verifying this in a case of his own, where there was a diaphragm-like occlusion without either proximal or distal clot. Sometimes, where these clots did not form, and there was simply the soft, yielding, newly-formed tissue, the impulse of the column of blood might cause it to give way and the lumen of the vessel to be restored. We must always remember that where there was aneurism we were dealing with vessels either diseased or prone to disease, and the necessary healthy reparative action might not take place. He believed that in general it was safer that the ligature be so applied as to divide the inner and middle coats, but insisted that there was greater safety in the antiseptic ligature, as less liable to produce ulceration through the coats of the

vessel, the animal ligature becoming organized. The whole subject of secondary hemorrhage was extremely interesting, and reminded him of his experiences during the war, when it came daily, almost hourly, under his observation.

Dr. Heath had seen many cases of aneurism and of subsequent hemorrhage after operation. Cited cases where greatest care was used and where compresses were of no avail. Considered that the condition of the patient had much to do with the danger to be apprehended.

Dr. Potter considered the subject germane to the point of secondary hemorrhage other than that connected with aneurism. Mentioned instances where it had occurred under his own observation; one especially he called to mind where it took place on the ninth day, after laceration of the perineum, which was finally controlled by a tampon, saturated in an alum solution.

Dr. Mynter thought that nearly all questions had been answered. Personally he considered that the cause of secondary hemorrhage, after ligation for aneurism, was always from atheromatous degeneration and the power of contraction of the vessels consequently being lost. Also, that clots often form, but are not invariably present. As to ligatures, he thought it dangerous to use silk; cat-gut, also, might unravel. In ligating he considered it sufficient to draw just tight enough to allow granulation to progress, complete occlusion being unnecessary.

Dr. Cronyn said: "An inquiry into the source and cause of secondary or recurrent hemorrhage after ligation of arteries for aneurism," being a subject of greatest interest, the Society ought to be grateful to Dr. Gay for his effort, not alone to present the various forms of ligature which have been thought most likely to either cause or prevent the hemorrhage, but to suggest a probable new source of cause, entirely independent of the ligature. For myself, I think that the etiology of the special case will always, more or less, determine, not only the nature of the operation to be performed, but the special value, or necessity, for this or that kind of ligature, when it is recollected that,

in a large proportion of cases, there existed, prior to the formation of an aneurism, an endo-arteritis; and that very often a number of aneurisms are found in the same person from this cause. It seems to me, therefore, that, when this diseased condition is known to exist, tape-like ligature would be of greatest value, for obvious reasons; but that, in a healthy vessel, as in traumatic aneurism, the silk usually used for tying arteries, or suture, will answer every purpose. So much for the ligature; but what causes the secondary hemorrhage? Dr. Gay thinks it very probably venous in character many times, if not always. Now there is a good deal of reason to suppose that the vessels engaged in the collateral circulation being required by the *vis a tergo* to dilate more rapidly than they are prepared to do, and by their inability to continue the normal *vis a fronte*, a venous stasis will take place in the neighborhood of the ligatured vessel, and to such a degree as to lead to rupture and hemorrhage. This may be the reason why the hemorrhage is so readily, as a rule, controlled by pressure, and why authors recommend it as the best mode of procedure; and where the author of the paper, from his experience, has found his hypothesis. Be this as it may, it will be well to recollect it when ligating diseased arteries for aneurism.

Dr. Hopkins remarked that it hardly became him as a practitioner of medicine to discuss a purely surgical subject. But referring to the literature upon the subject, said the notion is now upon the ligature itself, losing sight of the fact of interference of force in the limb beyond the point of ligature, venous stasis being always present, seemingly to favor any chemical changes that might occur.

Dr. Gay, in closing the discussion, said more time is required than the limits of the paper would allow to do justice to a subject of this nature. Proof, however, had been furnished that the source of secondary hemorrhage is not always at the place where the ligature is applied. A theory, founded upon the resistance to the destructive and degenerative processes of the arterial

tissue, is advanced without attempt at elaboration, to account for source of secondary hemorrhage. The autopsy referred to showed the artery had preserved its cylindrical form two months after it had been divided by the ligature. The experiment cited, of injection of water into the common iliac artery, furnishes a link in the chain of evidence in support of the theory alluded to. When the femoral artery was divided below the ligature, water, instead of returning through the iliac vein, entered and passed out through the femoral artery. How did the water get there? You will answer by saying this is accomplished through the anastomotic system of vessels, hence follows the legitimate conclusion that when the circulation in any large vessel has been, for a time, diverted or obstructed—so soon as the collateral circulation has fulfilled its temporary purpose in maintaining the life of the limb—the blood current will return again to its normal channel. As a proof of this, the fact is referred to of recurrent popliteal aneurism. Pressure is so forcible when the return current occurs as, probably, to rupture a branch of the anastomotic vessels, when the blood forces its way back through the open wound.

Voluntary Communications—Dr. Hartwig presented a paper on "Operative reunion of a broken patella after two years; success almost perfect." Mr. Herlan, of this city, a square-built and muscular man, fell, two years ago, breaking his patella transversely. The condition was not recognized by the attending physicians, and the joint merely treated with ointments. After a time he walked with crutches, and finally with a cane. In slippery weather he fell five times during two years, and was each time laid up a few days on account of pain in the knee. His condition annoyed him so much that he requested me to unite his patella operatively, declaring definitely that no appliance would satisfy him, though I duly explained all the risks of the operation. Status—Patient walks with his foot very strongly outwards, bends the knee 110 degrees and cannot stretch it actively, but helps himself with the other leg. Only very insig-

nificant ability to extend the leg during walking. Separation of the fragments over four inches. When the leg is extended, I can move the upper fragment one-half inch downwards. Operation 28th of February, 1882, Dr. Heath, Marine Surgeon, Dr. Packwood and Dr. Frank, of this city, assisting. Four per cent. carbolic acid spray clogged, after a while, and was substituted by repeated syringing with two per cent. solution, Lister's protective silk and ten per cent. salicyl cotton for dressing. Narcosis with chloroform; incision on the outside. In the joint many adhesive bands and a quantity of sub-patellar fat cut away. Edges of patella pared with a strong knife. Two holes drilled in each piece, obliquely towards the edge, not touching the joint surface of the patella. I used for drilling tooth-drills, which are very unsuitable, because stouter in the shank than in the drill-head. Thus, one head breaking off, I left it in the patella and bored another hole adjoining. Now, strong hooks were inserted into the tendon of the quadriceps and we tried to pull the patella down, but that was impossible and only strong jerking of the quadriceps the consequence. Thus I was compelled to cut the quadriceps across, while my assistants pulled on the tendon. I had to cut down to the bone and on the inside, near the femoral artery, before the patella yielded sufficiently. The inter-muscular tendinous extensions formed the resistance. Ligating the muscular branches, drawing strongest double silver wires through the patellar pieces, two single wires through the adjoining fasciform tissue, cutting a hole on each side of the joint for drainage tubes and sewing the knee wound with cat-gut, finished the operation. Posterior splint along the whole leg. Volkmann's canvass with the center hole to lie upon. Upper wound left open, but covered with modified Lister's dressing. The shock was considerable, but in the evening reaction set in and the temperature rose to 100° ; on the next day to 101 ; third day, $100\frac{1}{2}$; fourth day, 100 ; after a few days the temperature went down to normal, rising occasionally $\frac{1}{2}$ to 1 degree. This was clearly a perfectly aseptic fever, and insignificant in itself.

Proof—The patient had splendid appetite from the third day. Primary union of knee wound; not a drop of matter formed. On the fifth day one, on the eighth the other drain was removed. Now the open wound began to granulate, and after four or five weeks the wound was considerably smaller, and epithelium began to cover the surface, while the patient showed, already, some ability to move the tibia. Had I left it as it was, a very susceptible deep scar would have formed. Therefore, and to shorten the process, I scraped the surface of the granulations off a little, lifted, with the shears, the skin all around for $\frac{1}{2}$ to 1 inch, and united the edges of the skin by sutures, leaving in the corner tubes for drainage. This *sit venia verbo* tertiary union took place almost through the whole length, and the space underneath filled up a little yet. Patient got up, though a few points were oozing a little, and walked, after eight weeks, with crutches. At present he does not require even a cane. Meanwhile, the skin has started to ulcerate at a point where, not unlikely, one of the wires in the fasciform extension, on the side of the patella, may come out yet. It will certainly do no harm. In the sitting posture the angle is 45° . This is as much as the patient can bend the knee spontaneously. Slight œdema of the leg prevailed a long while, of course owing to the transverse scar. As far as the patient can bend his leg, he has complete power. Probably more bending would have been possible, if I had instituted early passive motion, but the upper wound did not admit of doing so and I risked a too stiff joint rather than to incur the risk of inflammation. Epicrisis—This is an additional triumph of Listerism. Truly, there are already cases on record. Agnew gives one after nine weeks, and Kœnig mentions one of his own as successful; but while these are all the cases I know of, some unsuccessful ones may not have been published, or they have escaped my search. Gross, Holmes, Hamilton, Bardleben, Billroth, and other standard works are, so far as accessible to me in Buffalo, altogether silent about the neglected fracture of the patella. For recent cases

this proceeding would certainly be easy, and, with perfect Listerism, without danger. Yet, according to my experience, Malgaigne's hooks are sufficient, and, without Listerism, safe. Perhaps withdrawing the blood with Dieulafois' aspirator would advantageously precede. I do not think that Lund's proceeding (*Am. Journ.*, April, 1882) is better. For perfectly loose pieces in the joint, opening, seemingly, may be *the* thing anyway (with removal of the pieces); but for neglected cases like ours the injury is, beyond comparison, more extensive. In this case the inside of the joint was hardly recognizable as such. Here I think the patient should be provided with mechanical support and the surgeon should not undertake to operate before he gives his patient a full and truthful explanation of the dangers incurred.

Dr. Mynter considered the result of Dr. Hartwig's operation certainly a brilliant one. Also, raised the question of non-union of bone, and said he thought it was from bleeding that continued so long that the muscles had time to firmly contract, and that on this account operations were often failures.

Dr. Heath, who was present at the time of Dr. Hartwig's operation, said the surroundings at the time were not at all favorable. He thought that the swelling was due to serum and not to blood as put forth by Dr. Hartwig.

Dr. Hartwig further detailed his course in the matter by explaining the necessities and urgency of the case, which were evidently sufficient to warrant such an unusual surgical procedure, as the result readily proved. He also warmly recommended antiseptic precautions.

Referring to the opening of joints, Dr. Cronyn remarked that it was not an extremely unusual thing for good results to follow, and mentioned a case where he opened the knee of a lady twenty-three years ago. Used compound tinct. of benzoin for dressing, and the results were all that could be desired.

Adjourned.

CLAYTON M. DANIELS, *Secretary*.

Editorial.

THE PREVAILING SENTIMENT ON THE CONSULTATION QUESTION.

The Secretary of the Medical Society of the State of New York has added, as a postscript to a circular in which attention is directed to the transactions of 1882, the following :

“ Every person receiving the circular, is requested to send by postal card to the Secretary, a brief message, over his signature, stating whether he does or does not *personally* approve of the plan of leaving to the judgment of the individual physician, whether he shall or shall not meet, in consultation, legally qualified practitioners, not of his own school in medicine. A general compliance with this request will show what is the prevailing sentiment of the medical profession of the State, on the consultation question. All communications will be treated confidentially, if so desired.”

It occurs to us to inquire the authority from which this request comes, and the motive inspiring it. Has the State Medical Society become convinced from the experience of its delegates at the American Medical Association, at St. Paul, that the sentiment of the profession throughout the country is opposed to the New Code? Is it the object of its officers, in adopting this method, to ascertain “ the prevailing sentiment of the medical profession of the State ” to strengthen the State Society in the position it has assumed on ethical questions, and to fortify it against such attacks and rebukes as the profession elsewhere are inclined to make? This circular anticipates the annual meeting of the State Society to be held in a few months, to which delegates are to be elected by the County Societies, who are presumed to express the sentiments of the constituencies that they represent.

We have devoted considerable space, in a previous number of the JOURNAL, to an able discussion of the New Code. The arguments, pro and con, were courteously presented. We are inclined to think that a longer period of incubation is necessary than the State Secretary allows before the "prevailing sentiment" can be formulated upon so important a subject. If the New Code is based upon sound principle, the time intervening before the annual meeting, will bring forth a more settled purpose of adherence to its previous action than can be formed at this early day.

In the circular from which we take the postscript above referred to, is the announcement that the transactions for 1882 may be obtained of the Secretary. The volume of 500 pages contains many very able articles, and a verbatim report of the discussions. We are compelled to offer a criticism which we feel is deserved, although not ventured with any captious spirit. A work containing the medical thought and deliberations of so able a body as is represented by our State Medical Society should be presented in a better dress. The paper and the type are inferior, and the appearance of the volume is far below the standard now maintained by our leading publishers of medical works. We hope future editions will be improved and the volume made to correspond, in our libraries, with other standard works in its typographical execution.

EDITORIAL NOTES.

WE have received a copy of the Transactions of the Medical Association of the State of Missouri, at its Twenty-Fifth Annual Session, held at Hannibal, May 16, 17 and 18, 1882. It comprises a volume of 220 pages, printed on excellent paper, and shows that our brethren in the West are earnest in their efforts to disseminate their opinions on current medical topics.

THE Beef Peptonoids, an advertisement of which will be found elsewhere in this JOURNAL, have been prominently brought into notice in the treatment of the late President Garfield. Dr. Bliss,

in the *New York Medical Record*, of July 15, 1882, furnishes quite an exhaustive article, in which he gives the results of their use in that case. The preparation is worthy of a trial, and we invite the profession to give us the results of their use of these nutritive agents.

THE secular press furnishes as a news-item that Dr. Boynton has presented his account for professional service, rendered to the late President, the amount being \$4,500. We are gratified that the position taken by Professors Hamilton and Agnew, in regard to compensation for their consulting attendance, has been adopted by one, at least, of the attending surgeons, and that the amount claimed is within the limits of justice and reason. The exorbitant claim of Dr. Bliss has been a scandal to the profession and a just source of criticism upon the part of the public.

Reviews.

Nitro-Glycerine as a Remedy for Angina Pectoris. By WM. MURRELL, M. D., M. R. C. P., Lecturer on Materia Medica and Therapeutics at the Westminster Hospital. Detroit, Mich.: George S. Davis, Medical Publisher. 1882.

Nitro-glycerine, or glonoine, which we think is the better name, has successfully passed through the stages of novelty and trial, and the more conservative practitioners are seeking for the most approved direction for its administration. This little work not only gives that, but the principal points are illustrated by reference to cases under the accomplished author's care. It is a timely and useful book.

Social Equality: A Short Study in a Missing Science. By WILLIAM HARRELL MALLOCK, Author of "Is life worth living?" New York: G. P. Putnam's Sons. 1882.

Although not in any sense a medical work, this is a book worth reading by physicians and other thinking men. The author takes the ground that any social changes that tend to

abolish *inequalitics* will tend also to destroy or diminish our civilization and happiness; that the idea of *equality*, as presented by the modern democrat, constitutes the most formidable danger that has ever threatened society; and that inequality, so far from being an evil of civilization, is the efficient cause of its development and present maintenance; that "labor is the source of all wealth and all culture." He most emphatically denies appealing to the actual facts of life to show that labor is *not* the ultimate cause of wealth, and that apart from other causes it would be utterly powerless to produce it, consequently that the distribution of wealth which the socialist programme demands is a scientific impossibility; and that no laws could accomplish it. Again we say the book is well worth the buying. Like all of Putnam's works, it is excellently printed with clear and easily-read type.

The Physician Himself, and What he Should Add to his Scientific Acquirements. By D. W. CATHELL, M. D., late Professor of Pathology, College of Physicians and Surgeons of Baltimore, Ex-President of the Medical and Surgical Society, active Member of the Medical and Chirurgical Faculty of Maryland, Honorary Member of the Lincoln Philosophical Society, etc., etc. Second edition, carefully revised. Baltimore, Md.: Published by Cushings & Bailey, 262 W. Baltimore St. By mail, \$1.25.

We are glad to see that this work has met with sufficient approbation to call out, so soon, a second edition. The author has availed himself of the opportunity to enlarge, re-arrange and generally improve the work, and it is now more than ever worth the reading. The book is full of good common sense. An incongruity between the Doctor's advice and practice is, in one instance, apparent. On page 57 he very sensibly says: "When you publish anything, do not follow the custom of appending to your name a long tail consisting of all the titles and honors, whether strong or weak, that you can rake together, with half a dozen etc. Such an enumeration is in bad taste and excites the ridicule of discerning people." On turning to the title page we find thereon the usual long list of empty titles, which, we entirely agree with the author, "is in bad taste," etc.

Syphilis. By V. CORNIL, Professor in the Faculty of Medicine of Paris, and Physician to the Lourcine Hospital. Translated, with notes and additions, by J. HENRY C. SIMES, M. D., Demonstrator of Pathological Histology in the University of Pennsylvania and Assistant Surgeon to the Episcopal Hospital, Philadelphia, and J. WILLIAM WHITE, M. D., Lecturer on Venereal Diseases and Demonstrator of Surgery in the University of Pennsylvania, and Surgeon to the Philadelphia Hospital. Fifty-eight illustrations. Philadelphia: Henry C. Lea's Son & Co. 1882.

This work is a valuable contribution to the literature of Syphilis, because it gives, to an extent unapproached by any other author, the minute anatomy and histological evolution of the various lesions of the disease, from the initial chancre to the gumma, including the mucous patch, the superficial and deep cutaneous syphilides, the osseous and visceral affections. The histological descriptions are largely original, and, as the author states, "I have spoken almost exclusively of what I have myself seen and investigated." The translators are to be praised for the manner in which they have performed their work, and their additions, which aggregate about one-third of the present volume, have added much to the practical value of the work by supplying additional clinical information on topics of importance. The illustrations are very good and sufficiently numerous.

A Manual of Hypodermatic Medication: The Treatment of Diseases by the Hypodermatic Method. By ROBERT S. BARTHOLOW, M. A., M. D., LL.D., Professor of Materia Medica and General Therapeutics in the Jefferson Medical College, of Philadelphia. Fourth edition, revised and enlarged. Philadelphia: J. B. Lippincott & Co. 1882.

The fourth edition of this valuable Manual is called for so soon after the issue of the previous edition that it is a more flattering comment upon its merits and value to the profession than can be given in any review we can write. Whatever Dr. Bartholow writes in the special department to which he has devoted his studies, is entitled to the highest consideration by the profession. In furnishing this Manual the same care and research and experience are observed as is found in all his pro-

ductions. The Manual contains a history of subcutaneous medication, with a list of remedies, used hypodermatically. The author gives a review of the physiological action and of the therapeutical effect of each remedy. It will be seen that the work supplies a long-felt want, and the distinguished ability of the author stamps it with the authority which at once inspires confidence in its contents as a guide to this important method of medication.

A Treatise on the Physiological and Therapeutical Action of the Sulphate of Quinine. By OTIS FREDERICK MANSON, M. D., Professor of Physiology and Pathology in the Medical College of Virginia. Philadelphia: J. B. Lippincott & Co. 1882.

This small work of 164 pages contains the results of the author's investigations into the physiological and therapeutical action of this most important remedy of the *materia medica*. The field of labor in which Dr. Manson has acquired his experience, and from which he has drawn his conclusions is sufficiently fruitful in the diseases requiring cinchona and its alkaloids to entitle his manual to a careful perusal. Having given it such examination, we are prepared to recommend it to the profession who are searching for a wider scope in which to use the remedy to which this work is specially devoted.

The International Encyclopædia of Surgery: a Systematic Treatise on the Theory and Practice of Surgery by Authors of Various Nations. Edited by JOHN ASHHURST, JR., M. D., Professor of Clinical Surgery in the University of Pennsylvania. Illustrated with chromo-lithographs and wood-cuts. In six volumes. Volume ii. New York: William Wood & Co. 1882.

A recapitulation of the distinguished authors whom the editor has secured in the preparation of this valuable and exhaustive work, and their subjects, will afford the profession a clearer view of its value than we can impart in any other manner. *Contusions*—By Hunter McGuire, M. D., Medical College, Virginia. *Wounds*—By Thomas Bryant, F. R. C. S., Guy's Hos-

pital, London. *The Antiseptic Method of Treating Wounds*—By W. Watson Cheyne, M. D., F. R. C. S., King's College Hospital, London. *Poisoned Wounds*—By John H. Packard, M. D., Episcopal Hospital and St. Joseph's Hospital, Philadelphia. *Sabre and Bayonet Wounds; Arrow Wounds*—By J. H. Bill, M. D., U. S. A. *Gun-Shot Wounds*—By P. S. Conner, M. D., Medical College of Ohio, Cincinnati. *The Effects of Heat*—By Thomas George Morton, M. D., Pennsylvania Hospital, Philadelphia. *The Effects of Cold*—By J. A. Grant, M. D., M. R. C. P., Lond., F. R. C. S., Edin., General Protestant Hospital, Ottawa. *Abscesses*—By Howard Marsh, F. R. C. S., St. Bartholomew's Hospital, London. *Ulcers*—By John T. Hodgen, M. D., LL. D., St. Louis Medical College. *Gangrene and Gangrenous Diseases*—By Edward M. Moore, M. D., University of Buffalo. *Venereal Diseases; Gonorrhœa*—By J. William White, M. D., University of Pennsylvania. *Venereal Diseases; The Simple Venereal Ulcer or Chancroid*—By F. R. Sturgis, M. D., University of the City of New York. *Venereal Diseases; Syphilis*—By Arthur Van Harlingen, M. D., Hospital of the University of Pennsylvania. *Venereal Diseases; Bubon D'Emblée; Venereal Warts or Vegetations; Pseudo-Venereal Affections; Venereal Diseases in the Lower Animals*—By H. R. Wharton, M. D., University of Pennsylvania. *Surgical Diseases of the Skin and its Appendages*—By James C. White, M. D., Professor of Dermatology in Harvard University. *Diseases of the Cellular Tissue*—By Joseph W. Howe, M. D., Bellevue Hospital Medical College. *Injuries and Diseases of the Bursæ*—By Charles B. Nancrede, M. D., Episcopal Hospital and W. Christopher's Hospital, Philadelphia. The work is printed upon the best quality of paper and contains 754 pages of matter. The list of authors and their subjects, which we have furnished, is a guaranty of its immense value as an addition to our surgical literature. The enterprising publishers in their efforts to bring out *the surgical encyclopædia* for the use of the profession deserve, as they are sure to receive, a liberal support and encouragement for their venture.

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THE USES OF ERGOT IN OBSTETRICS.*

BY CHAS. G. STOCKTON, M. D.

Of these uses of ergot, an agent lending the parturient woman new power, it would seem unnecessary to speak to the profession, which, for the past 75 years, has had the action of the drug under constant observation. But, recollecting that the cynicism of the times questions the uses of such great institutions as Christianity and Divine law, it is not so remarkable that it should have doubts concerning simples in their relation to physiological forces. Though it would seem that the action of ergot is well enough understood to assure its successful application and do away with such remarks as that made at the recent meeting of the American Gynecological Society by Dr. Joseph Tabor Johnson, of Washington, that he believed the human race would be better off without than with ergot in the management of labor, and that it certainly should never be given to a primipara. Such an expression is to be deplored, and is akin to the statement that vaccination is ineffectual, or that mercury is

* Read before the Buffalo Medical Club, Nov. 1, 1882.

useless in the treatment of syphilis; and, although it is a digression from the question, I must be allowed to state my humble opinion that our medical discussions are not so conservative as they should be—for, if so-called liberal views *do* lead to growth in medicine, such growth is apt to partake of the nature of neoplasm.

The manner of the action of ergot is to some extent unsettled, but there is agreement that its administration is followed by vaso-motor spasm, and probably by contraction of all unstriated muscular tissue. In 1870, Holmes, after repeated experiments, concluded that the action of the drug was peripheral. After section of a sympathetic he found the vessels supplied by this nerve to contract after the introduction of ergot; and when the drug was injected into the right jugular, the arterial pressure at first fell, which our experimenter attributed to spasm of the pulmonic capillaries retarding the flow of blood into the left ventricle—and from these he inferred that the action was peripheral—and the inferences were supported by the experiments of Wernich in 1872.

But Carl Vogt, in 1869, and Eberty, in 1873, found no vaso-motor spasm in a part where the sympathetic had been cut, and they found no arterial depression to precede the rise, but, on the contrary, a prompt and powerful increase of arterial tension followed the injection of ergot. Dr. Geo. B. Wood mentions a case where it produced great prostration with almost absence of pulse. It is known that when ergot is applied to bleeding surfaces, it acts as a styptic; and Dr. Mundé says that oxytoxic effects are obtained by introducing it into the uterus in form of a suppository. In these instances it would seem to have a local and not a centric action. Without questioning *how*, there is less conflict in regard to its action upon uterine muscle; for most authorities say that it induces contraction in a certain proportion of cases. Wright found it to fail in this respect; so did Bonjean. But Dies, Percy, Laurent, and others, found it to cause abortion in various animals, and M. Bodin reports an epidemic among

cows from feeding upon ergotized grasses. Wood says it will often act as an abortifacient; Rigby gives directions for using the secale for inducing premature labor, which, he says, rarely fails to produce the desired result.

Prof. Ramsbotham states that he has made a great number of trials and found that expulsive action soon followed its exhibition with very few exceptions. "Administered to pregnant women," says Phillips, "ergot excites uterine contraction in a manner truly remarkable, facilitating parturition or bringing on abortion." Says Ringer: "Its effects are most expressed upon the womb, especially when pregnant, exciting in the gravid uterus powerful and continuous contractions." Bartholow recommends it for expelling abnormal growths from the uterus by means of the uterine contractions thus excited, yet, on the subject of abortion, remarks: "It is no longer a matter of doubt that ergot promotes uterine contractions; that it originates them without previous efforts of the womb is questionable." Bartholow needs explaining. Dr. Frederick reports a case where ergot was successfully given for the induction of labor. A number of old practitioners I have questioned, and nearly all expressed belief in this property of the drug. During labor the fungus has been used very largely in every stage. Country accoucheurs, called from a distance to attend women whose labors are tedious, often give it without much regard to the stage, or the condition of the cervix, and, undoubtedly, have the satisfaction of hastening delivery in a great majority of cases. The experience of these men is very large. I knew a man who had attended over 1000 confinements, who seldom used forceps, who generally gave ergot, and whose reputation for good luck was enviable. We must remember that men have notions and are predetermined; and it will be well for us who habitually use forceps and lament the lacerated women and dead fœti of the ergot-giver, to compare the results of our cases with those of him who carries his spurred rye and leaves his instruments at home.

Junius, in one of his incomparable letters, remarks that the man who advocates a cause may begin with a weak faith and argue himself into a strong belief, and I am not sure but this principle is operating upon me in my zeal to present before you properly the obstetrical uses of ergot. Many give ergot in the first stage of labor when the os is not dilated, sometimes not dilatable—confessedly adventuresome practice, although frequently successful. It is advised to withhold the drug until these changes have taken place; then when the pains are not of sufficient strength, when there is a safe presentation, and when there are no deformities of the pelvis or soft parts, it should be given; and a good rule for action at such times seems to be that of a friend, who says that when the membranes are pushed down, forming the caput succedaneum, or when the scalp is wrinkled during a pain, ergot should not be given, as the pressure is great enough for the head to bear, and if assistance is needed, forceps should be applied; but when the pains are too feeble to produce these signs, ergot is indicated and should be given in 20-drop doses every 20 to 30 minutes until the contraction, are sufficient, and should then be discontinued, to be again given when the pains become weak. It may be said that this will bring about unremitting tonic contractions. This is not always the result if the rye is given in small doses and judiciously, and as for that matter, there are cases of natural labor where only one continuous, enormous contraction is had from the first intimation of labor to the birth of the child. I have reports of two such cases.

In placenta prævia ergot is often given with benefit, and in partial placenta prævia its use is highly recommended with the expectation of producing firm contraction, and, from the pressure of the fœtal head upon the placenta, prevent hemorrhage. It is proper to use the drug in such cases during the first stage, upon the authority of Ramsbotham, Lusk and Barker. If the os is not well dilated it should be, and ergot still given, is the opinion of Dr. Hanks, of New York.

In accidental hemorrhage it should be given in moderate doses, and Rochester says it will sometimes prevent impending abortion; but when the hemorrhage is excessive, Playfair advises the rupture of the membranes and the production of firm contraction by full doses of ergot. In breech presentations, when the breech has reached the plane of the pelvis, Trousseau says that ergot should be given, and the idea appears to be a good one.

My opportunities for hearing medical lectures, a method of teaching which Morell Mackenzie pronounces a thing of the past, have been limited, but with all the future has in store for me, I am sure I shall never forget that graphic description of post partum hemorrhage which the late Jas. P. White was accustomed to give us in his lecture on that subject, nor shall I forget with what vigor he pointed to ergot and its uses, when the hour of the "kite-tailed tampon" had passed away. Everybody gives ergot in post partum hemorrhage, and if the drug had no other uses we ought all to unite in praises to Ceres that every kernel doesn't go on to full fruition, and that we have the fungus, *secale cornutum*.

To excite uterine contractions and induce abortion or labor; to hasten the termination of the first stage when the os is dilatable; to expedite the second stage, and, in its complications, add to the safety of mother and child; to prevent hemorrhage in abortion from the first month to the last; to facilitate the discharge of the secundines; to procure tonic contraction after the escape of the placenta and thus avoid atony of the uterus and post partum hemorrhage; to control flooding; to speedily check relaxation of the uterus, intermitting with distressing bearing-down pains and hemorrhage; to prevent, by means of early tonic contraction, after-pains in general, particularly in women who have borne many children; to prevent absorption of septic material, thus acting either prophylactically or curatively in puerperal septicæmia; to secure and hasten the process of invo-

lution after abortion or labor at full term; to relieve long-continued lochial discharges, is ergot useful, in some cases indispensable.

THE ABUSES OF ERGOT IN OBSTETRICS.*

BY C. C. FREDERICK, M. D.

Seventy-five years have passed since ergot was first brought to the notice of the profession in this country by Dr. Stearns, of Saratoga, in a letter to Dr. Ackerly concerning its use. Soon its power of producing strong uterine contractions became generally known, and as is the wont of Americans, generalizations were soon made from few data, and in ergot was foreseen the boon of every parturient woman, and a substitute for all instrumental interference. Accordingly, it became fashionable to give ergot indiscriminately in obstetric practice, and as a result the literature of this subject, for the first fifty years of its use, is full of instances of its enormous abuse. And yet, with all that has been written about this subject, there still are those practicing medicine, not only old but young men also, who are not aware of its dangers and who do not rightly appreciate the few indications for its use. Sir James Y. Simpson once said: "I believe few remedies have been more abused in practice."

In this connection it seems proper to determine, so far as possible, whether ergot has the power to originate uterine contractions. All admit that if the parturient effort has begun, ergot will intensify the pains, in fact produce tonic contraction. Such writers as Wood, Bartholow, Elliott, Cazeaux, Chevasse, Beck, Fordyce Barker, Pareira, Bayle, Waller, Holmes, and others, do not accord to it this power, or at least very seldom and only in exceptional cases. Mr. Wright, Bonjean, Chatard, Warner, Villeneuve, failed in every case to produce abortion in inferior animals. On the other hand, Chapman reports that in mammals he never failed to produce abortion in a short time.

* Read before the Buffalo Medical Club, Nov. 1, 1882.

Combs gave it to three pregnant bitches, abortion following. Diez, Oslere, Percy, and Laurent aborted guinea-pigs, cows, cats, rabbits and sows. Erskine always succeeded in aborting cats at various periods of pregnancy. M. Bodin reported an epidemic abortion of cows in 1842, near Trois Croix, France, attributed by him to ergotized grass. Gilman says, unqualifiedly, that ergot will abort the human female; Patterson of Glasgow, Prof. James, Mr. Heane, Drs. Dewers, Weicke, DuBois, Chatard, and others, add their testimony to the fact. Dr. Rambotham cites twenty-six instances of premature delivery produced by him with ergot alone, some labors following a single dose, others requiring the repetition of the dose thirty or forty times before pains began. Playfair says: "There is no doubt that ergot has the power of inducing uterine contractions."

From this evidence, I do not think we are justified in ascribing or denying to this remedy abortifacient power in all cases. The middle course seems the only reasonable ground, although there is no guide to the amount of confidence that can be reposed in it in any particular case.

If, in any instance, it does succeed in originating pains, to give it for this purpose, whether the premature delivery be with criminal intent or justifiable, is evidently wrong.

If given with criminal intent, and it succeeds, its worst effects can but be an inadequate retribution to the offending party for their transgression. When premature artificial labor is justifiable by reason of contracted or deformed pelvis, or excessive size of the foetal head, there certainly are very cogent objections to its use, although the earlier obstetricians gave it for this purpose. Dr. Elliott said of such cases: "When it does act, it acts too much!" Allowing that full dilatation of the cervix should promptly follow the advent of the pains, thus ridding the mother of the probability of lacerated cervix, the powerful efforts of the uterus to force the child through the deformed or contracted canal are apt to make either a rupture of the uterus or kill the child, and possibly both. In a deformed pelvis there is apt to

be a malpresentation. Rupture of the sac with ergot pains will, in all probability, take place before the position has been diagnosed, although since external palpation affords, with practice, so accurate a diagnosis of position, this objection is not so forcible as formerly. No doubt the accoucheur, to a great extent, is prevented from doing what he otherwise could do, to correct a malposition or assist nature in moulding the head to the maternal passages, and deliver the child and mother from their urgent danger. With the light of the past experience of others, I cannot understand how any man can so jeopardize the welfare of his patient.

It is a fact well known that ergot is very commonly given by many practitioners in abortion, from fear of hemorrhage. Abortions occurring during the third and fourth months of pregnancy are of two classes: one in which the sac is delivered entire; the other where the sac ruptures, the fluid and fœtus are expelled and the placenta and membranes are retained. The effort should always be to prevent rupture of the sac; therefore, ergot given before dilatation of the cervix would only rupture the sac by its powerful contractions. Dr. Nœggerath has seen abortions at the second and third month, when both the internal and external os were fully dilated, then ergot given caused a spasmodic contraction of the circular fibres of the inner os, with retention of the ovum. Even if the pains be feeble, ergot should not be given, except in severe hemorrhage, till the ovum has been so far expelled, entire, as not to allow the uterus to enclose it when it contracts. When hemorrhage occurs after rupture of the sac, ergot only serves to hold the placenta and membranes more securely in the uterine cavity, and is not sure or even probable to stop the hemorrhage. To remove the placental mass is the rational indication, and then give ergot, if necessary, to secure permanent contraction. Ergot is not to be relied upon, however, in all cases, hence the mistake should not be made to look to it for security from hemorrhage, when intra-uterine applications or the hot douche would be far more effective.

There are no indications for ergot in the first stage of labor, except in accidental hemorrhage and partial placenta prævia, in both of which Drs. Fordyce Barker and Lusk recommend its careful use. The tonic contractions which it produces, instead of the normal intermittent pains, tend to prevent the dilatation of the cervix. Suppose labor to begin, the os partially to dilate, pains cease and not recur again in several days, should ergot be given, artificial dilatation practiced and the woman delivered? Certainly not. I heard, not long since, of such a case, treated in the manner described. The results of ergot given in this stage may be rigidity of the cervix with subsequent laceration, rupture of the perinæum or uterus, or death of the child.

Ergot is not indicated in the second stage of labor, except for true uterine inertia, and then not so much to expel the child as to prevent post partum hemorrhage from uterine atony, because forceps are preferable for the delivery of the child. "Even under these circumstances," says Dr. Lusk, "it should not be given if there exist the slightest mechanical obstacle to delivery, or if the foetal head be high in the pelvic cavity." In primiparæ, extra caution should be exercised. The fact of never having given birth to a child, together with the tension of the soft parts, contraindicate it. It is very necessary to determine if there be true uterine inertia. In hydramnii, the uterine walls being distended and too weak to rupture the membranes, pains often stop, ergot is not indicated, but removal of part of the liquor amnii. Labor may be retarded or pains stop from the resistance offered by an unyielding cervix. Ergot would probably rupture it. The uterus may be displaced, the head pressing against the sacrum; or a malpresentation not recognized; or a head not having undergone flexion; or there may be a distended bladder or rectum. In any of these the uterus is apt to tire after long-continued efforts to expel its contents. Here, certainly, a correct understanding of the causes of delay and the proper proceedings instituted for their relief, are more indicated than ergot. Then, after correcting the conditions which caused uterine exhaustion,

if new stimulus is needed, Drs. Fordyce Barker and Albert H. Smith employ quinine in ten or fifteen grain doses, with excellent results, the effect being to stimulate the normal rythmical pains and prevent after-pains.

Sometimes pains maintain their normal rythm and force during the second stage, till the head reaches the floor of the pelvis. Under such circumstances, if the pains lose their expulsive force and are inefficient, a rigid perinæum is generally blamed for the delay. In the primipara, of course, much greater delay must be expected in softening the perinæum. This faulty action, as pointed out by Dr. Lusk, may be due to exhausted nerve-power, or to excessive uterine retraction. "In the latter case," says Dr. Lusk, "the faulty action results from the withdrawal upward and the consequent lessening of the intra-uterine pressure. * * * Hoffmeier found, in a number of instances, when the head rested on the pelvic floor, that the ring of Bandl, which was made out by palpation through the abdominal walls, was situated at from five to seven inches above the symphysis pubis, so that the contractile portion of the uterus covered not more than one-third of the fœtus. Under such circumstances, while the patient suffers from intense pain, the contractions of the partially-emptied uterus do not possess the force to overcome the resistance of a rigid perinæum." If no resistance is to be overcome other than that of the soft parts, the head having rotated in the pelvis, the assistance rendered by the abdominal muscles, combined with the method of expression recommended by Bidder, may suffice to the delivery. If rotation and flexion are not perfectly performed these forces may fail. "In such a case," to again quote Dr. Lusk, "the available remedies are ergot and forceps. Of these, the advantage of safety and celerity are all on the side of forceps. * * * When the tardy labor is due to tonic retraction, the use of ergot is calculated to aggravate the sources of delay. In other cases tonic retraction is the direct result of ergotic action."

When any indications arise for speedy delivery in either the first or the second stage, as in eclampsia, the favor of modern

obstetricians is given to forceps, although Bayle has reported five cases of puerperal convulsions in which ergot successfully and rapidly accomplished the delivery. There is no doubt that many practitioners, either inexperienced or timid in the use of forceps, resort to ergot in expediting labor rather than use them. To choose between ergot and the unskillful use of forceps is certainly a difficult question, and is probably the one which perplexes many and determines their favoritism to ergot. Lusk says: "Many practitioners, however, who have observed that in practice ergot often acts, likewise, with speed and safety, accord to it a large measure of confidence, but along with these more fortunate experiences there is a shady aspect to be remembered."

When the anxiety of the accoucheur as to the safe delivery of the child is relieved, there still rises up before him the fearful spectre, the fear of post partum hemorrhage, and not until the placenta is delivered and the uterus in a state of tonic retraction and contraction does this phantom vanish. I believe it is quite common to administer a dose of ergot, just before the birth of the head or about that time, in order to secure good contractions at the delivery of the placenta, or to assist in its expulsion, especially if there has been a tendency to weak and tardy pains during the latter part of the second stage. It has been the experience of many, who have given ergot in the second stage or at its completion, to be troubled in the third stage with "hour-glass contractions," retained placenta, and more or less hemorrhage. Dr. Chevasse reports twenty-three cases of hour-glass contractions with retained placenta in his practice in seven years; Mr. Jukes had six in succession; Mr. Heane, Mr. Elkington, and Chevasse, Sr., report many. The more modern obstetricians frown upon this misuse of ergot, the mode of expression by Credé being entirely adequate to the successful completion of the third stage. Dr. Lusk expresses himself thus: "The tardy expulsion of the placenta, due to atony of the uterus, is of rare occurrence when the Credé method of expression is uniformly practiced." The same author very graphically gives the mech-

anism of hour-glass contraction and retained placenta: "After birth of the child, retraction is nature's safeguard against hemorrhage. As the result of the abuse of ergot, or in other cases from an abnormal adherence of the placenta, such an extreme degree of retraction may be reached before the completion of the third stage as to lead to the imprisonment of the placenta within the uterine cavity. In these cases, complete retraction in the body of the uterus is prevented by the presence of the placental mass. Below the latter, when no obstacle is opposed to the shortening of the muscular fibres, a constriction results. The constriction is most pronounced at the ring of Bandl." Thus ergot may defeat the very object for which it was given, and substitute for a short and easy third stage a long, tedious and painful effort to overcome the irregular contractions and secure the placenta. After expression of the placenta, ergot may be given to keep the uterus contracted; it is not to be entirely relied upon, however, in all cases. When should ergot be given for this purpose? Certainly not so early that its specific action can be exerted on the uterus before the completion of the third stage. Dr. Prescott, in a series of experiments, found its action to follow in from seven to twenty minutes after stomach administration, in the majority of cases in about ten minutes.

Dr. Beatty, of Dublin, pointed out to the profession, several years since, that post partum hemorrhage, due to uterine atony, occurring in a weak, delicate, lax-fibred, pale, spare woman, with weak but perhaps rapid pulse, and slow, feeble pains, can not be controlled by ergot, in fact, ergot increases the shock following the delivery, and if persisted in will kill her. Fordyce Barker has seen several deaths occurring under these circumstances, when a full dose of opium, combined with temporary measures to control the hemorrhage, would have been followed by tonic contractions of the uterus.

The dangers to which ergot may expose both mother and child demand our further attention. Dr. Trask, of White Plains, N. Y., in a paper on ruptured uterus, remarks that few practi-

tioners are honest enough to report a rupture of the uterus following a dose of ergot which they have prescribed. For this reason very few journals ever have a report of the kind, and the statistics are necessarily very incomplete. Dr. Miller, in his obstetrics, refers to one medical journal, in 1841, which reported in one month two cases of rupture of the uterus from ergot, the names of persons and localities being suppressed.

Bandl has shown that ruptures of the uterus generally begin in the lower segment in the space between the ring bearing his name and the os externum, and that these ruptures follow a thinning of this segment, due to a retraction of the fundus and body of the uterus above the ring of Bandl. It readily appears, then, how ergot can be the primary cause of rupture of the uterus, since its characteristic action is tonic retraction of the body and fundus, as before stated.

Lacerations of the cervix and perinæum, it is readily seen, are far more apt to result from the tonic ergot pain than from the intermittent and slow dilating process of nature.

We certainly should not leave this subject and forget the little stranger who so often has laid down its life as an atonement for the misuse of ergot. Dr. Hosack wrote: "Ergot has been called, in some of the books, the *pulvis ad partum*; as regards the child it may, with equal truth, be denominated the *pulvis ad mortum*." This action upon the child has been theorized upon to the effect that the ergot was either carried to the child and produced a toxic effect; or, by pressure upon the head during the tonic pains, death resulted; or, the third and probably correct notion, that death is caused by compression of the placenta and cord, the child dying from asphyxia. Dr. Ramsbotham disproved the toxic effect on the child by observing that however much of the drug was taken by the mother, unless it produced its specific effect on the womb, the child did not suffer. McClintock and Hardy have observed that after its administration, in a majority of cases, a marked decrease is soon noticed in the pulsations of the foetal heart falling to 100 or below, succeeded

by irregular, then intermitting beats, and, after a variable period, the heart sounds became inaudible. Both of these observers, as well as Ramsbotham, found that if the child was not born within an hour, as a rule, after giving ergot, it would almost certainly be dead. Often they found it necessary to resort to forceps to save the child. It may be of interest to give some facts as observed by different obstetricians concerning this infant mortality from ergot: Davies, London, 10 born, 4 dead; Chevasse, 18 born, all dead; Patterson, 8 born, 3 dead; Mr. Chattò, in 420 labors, gave ergot 80 times; 422 children were born, 31 dead, 10 of the 80 and 21 of the remaining 340; one in eight with ergot died, without ergot one in seventeen died; McClintock and Hardy, 30 births, 20 dead; Dr. West, 69 born, 8 dead; Mr. Jukes, 6 born, 5 dead; Hosack, 3 born, all dead; Hardy, 48 born, 34 dead; Chatard, 37 born, 16 dead; Church, 7 born, 6 dead. I find that on the average, in all these cases reported above, one child out of every two and one-tenth died. Dr. Fordyce Barker reported, several years ago, that Dr. Stearns himself suffered so much in reputation from the infant mortality in practice by use of ergot that he was obliged to quit his field of labor and remove to New York City.

During the past twenty-five years I do not think ergot has been so grossly abused as in the half century preceding. There are those who think the reaction from that period of abuse is upon us, and that ergot is not used as often as indicated. It seems quite probable that the use of ergot in small doses to gently stimulate the tardy pains will come into more general vogue in the near future than now obtains. No doubt but that one abuse of ergot has been its exhibition in too large doses, thus getting its extreme effects. The subject of the use and abuse of ergot is one of great interest and merits the close study of every general practitioner, for every one does more or less obstetrics. It is doubly important, for in its right use or abuse two may be benefited or suffer.

Clinical Reports.

A CLINICAL CONTRIBUTION TO TREATMENT OF URETHRAL STRICTURE.

BY FRANK DUDLEY BEANE, A. M., M. D., of New York City.

W. J. L., aged 52 years, American, clerk, bilio-nervo-sanguine temperament; general health had always been good. First (and last) catarrh, virulent, urethræ in 1844, degenerating into gleet, which lasted for years. In 1851 suffered a severe contusion of the perinæum by being thrown upon the pommel of his saddle. No blood or difficulty in urinating followed, but an abscess formed, which was opened by Dr. Gurdon Buck, who kept a silver catheter in the bladder till the fistula was nearly healed (two weeks). He then dilated the strictures, which the patient had treated by the use of bougies for several years. Finding them resilient, the Doctor performed internal urethrotomy, and followed this up with dilatation to No. 10 (English gauge), this calibre being maintained for years by patient. Then came neglect of bougies, so that in 1867 the strictures were as small as No. 2 or 3 (English). At this time Dr. Buck performed Holt's operation, because patient desired immediate "full size" (?) dilatation, having but one day in the city. No. 10 (English) again used for years, till, through neglect again, the patient found himself suffering from contraction to No. 2 (English), considerable vesical catarrhal inflammation, and the symptoms below enumerated. Two days prior to calling me he had attempted to introduce a small bougie, but, instead of passing into the bladder in usual way, he felt it suddenly move on (without "grasping"), causing very sharp pain, and withdrawal followed by a drop or two of blood. This was in April, 1875, when he first consulted me, his condition at that time being as follows: Very frequent and painful micturition, almost constant pain in the perinæum, pain in the back, loins and abdomen, urine varied in quantity and appearance—always more or less cloudy—stream

very minute, restlessness, slight feverishness, loss of appetite, incapacity for business. Detected two strictures, one at $4\frac{1}{8}$ inches, the other at $5\frac{3}{16}$ inches, former = calibre No. 5, latter = calibre No. 6,* both tunnel-like, irritable, severely resilient.

At once put him upon morphia (for pain), occasional doses of belladonna, pareira brava, and continuous dilatation, beginning with catheter No. 9. Nourishing diet, including plenty of milk and broths. At the beginning of the fifth day of treatment a semi-circular indurated, painful swelling appeared to the left of where the scrotum joins the perinæum. At this time dilatation had been advanced to No. 16 bougie olivaire, which passed with difficulty and pain, tightly grasped; poultices; swelling increased, accompanied by decided chills; urine had to be drawn with catheter, great vesical tenesmus; was given potassa acetate and sodæ bicarb. several times daily, in addition to the morphia. Two and a half days later I opened the perinæal abscess under ether, allowing some $f\frac{3}{4}$ of highly offensive, greenish-yellow, pus, slightly streaked with blood, to escape; carbolized dressings; great general relief; urine drawn off with catheter for 24 hours. On following day passed No. 13 bougie olivaire, followed by catheter No. 11, drawing off $\frac{2}{3}$ pt. urine.

Simple dilatation thereafter continued. Urine passed *per perinæum* two days later. Four days later the wound had almost completely filled up, only a few drops of urine passing through the fistula. One week later fistula completely closed. Eleven days subsequent, dilatation had reached No. 16 bougie olivaire. Passed urine six to eight times a day in quite a fair stream.

During treatment by simple dilatation patient had several *attacks of chills, followed by fever, this succeeded by sweating* (regular ague paroxysms) to which he had been subject for several years. Plenty of covering, hot drinks and absolute rest relieved these attacks, but quinia did not prevent them. These attacks were undoubtedly due to reflex action propagated from the strictures.

* French gauge always referred to in these pages.

On June 11th, following (one month and sixteen days from commencement of treatment), I was able to pass steel sound No. 17 for the first time. This was passed every four or five days till July 17th, when No. 18 went into the bladder. The use of this instrument was continued every six or seven days till the following December, afterward every two weeks, for a short time. Patient instructed to use it regularly every twelve to fourteen days, which was done until May, 1877, when I lost sight of him. He had remained in excellent general health since July, 1875, the bladder not emptying itself oftener than five to seven times daily; urine normal excepting the presence of a small amount of pus. No operative measures desired.

On Aug. 3, 1880, the patient again presented himself for treatment. His history since 1877 was: Business embarrassment, neglect of dilatation, quite a long sojourn out West, where he fell seriously ill from intermittent fever and his urinary troubles; returned home thoroughly broken in health, treatment (very meagre, simple dilatation and washing out bladder through a new fistula) at the hands of a Brooklyn physician. Worn out in body and mind, he again presented himself to me in the following condition: Great loss of flesh, cadaveric-sallow skin, almost complete loss of appetite, bowels irregular, general strength greatly reduced. A fistula *in perinæo* at a new site, through which nearly all the urine passes—only guttatim—through the urethra; pain and smarting in fistula; urine loaded with pus and phosphates; albumen (due mostly to pus); no casts; voided every one and a half to three hours. Occasionally, as of old, only more frequently, has “ague attacks.” Quinia (gr. x: xv, daily), iron, pareira brava, claret wine, etc., as general treatment. Simple dilatation by bougies, beginning with No. 3. By introducing the bougies every one, two or three days, I was enabled to pass No. 12 at the end of two and a half months, but the strictures were so resilient and irritable

that there was but little result obtained as far as voiding urine *per urethram*.*

During the latter part of October substituted ext. cannab. ind. (gr. ij: viij, daily) for morphia, and with good effect.

On November 16th he began upon quinia, 3ss daily, in three doses. On November 21st commenced continuous dilatation, beginning with catheter No. 10 and ending with No. 22 on December 1st. After the second day, catheters introduced under ether, so terribly irritable and tender the strictures. After removal of each catheter a prolonged warm sitz-bath given.

Examination of urine on December 6th found it acid, 1016, abundance of pus, albumen, phosphates in excess, otherwise normal.

On and after Dec. 4th, daily introduction of bougies Nos. 18 and 20; always grasped as in a vise; ether invariably given. Following these introductions, a minute stream *per urethram* for the first micturition, afterward only *guttatim*. Urine voided freely and almost painlessly through fistula. On Nov. 27th, began washing out the bladder, through catheter, passed *per urethram*, daily, with sol. potass. permang. (gr. i to fʒi). This treatment continued, at intervals of two to five days, without any material improvement till Dec. 20th, when a deep perinæal swelling showed itself a little posterior to the existing fistula. On January 1, 1881, it had approached the latter, fluctuation being easily detected, though situated deeply, I made a free incision and let out quite a quantity (perhaps fʒij) of ill-smelling pus and blood. No urine found its way through this opening, which healed thoroughly in three weeks; antiseptic syringing and dressing. On the 7th of January (six days after above operation) soreness, succeeded by swelling, appeared in the region of the "membranous" urethra, pushing forward and downward on the right side toward the testicle, involving the scrotum,

* During the second week in November the strictures had become so irritable and resilient that only No. 4 could be passed, even this giving great pain. Scarcely any urine passed *per urethram*, and the fistula had become so much closed and irritable that considerable tenesmus and pain accompanied urination, which occurred every one to one and a half hours during the day, every two hours during the night. His general health had become greatly deteriorated by pain, loss of sleep and appetite, etc.

gradually acquiring an elongated shape, lying to the outer side of the testicle, its base at the junction of the ischium and pubes (right), its apex at the lowermost point of the right scrotum. Four days later I aspirated about f3vj of very thick, ill-smelling pus from the tumor, as temporary relief, freely incising it eight days later, letting out f3ij bloody pus and about f3i bloody urine. Thereafter urine flowed also through this new fistula as well as the other.

The quinia—3ss daily—nourishing, digestible food, milk punches, local syringing, occasional hip-baths, passage of bougies was continued since Nov. 7, 1880, and in addition began upon a mixture of iron and strychnia. Morphia occasionally taken for excessive pain or irritability. Feb. 11th, scroto-perinæal wound almost healed; gives exit still to urine. Considerable induration of scrotal tissues on right side, and upward at the base of the original swelling. Patient improved a little in general health; can exercise some in open air.

March 25th.—Urine same physical conditions as last reported. Average urination, three hours; small stream through each fistula; about size of No. 8 bougie through urethra. Decided decrease in local induration. So far this month has been taking only ʒi quinia daily.

Explained to patient the danger to which he is exposed from this constant pressure upon the bladder, and indirectly upon the kidneys, as well as the *reflex* influence of the strictures upon the latter organs, dilating upon the importance of not longer relying upon palliative but at once resorting to operative measures, which will free him from suffering, ill-health, and the great danger which constantly menaces him. A few days later he communicated to me his decision, namely, to undergo such preparatory treatment as I thought best prior to operating. To use his own words: "I would rather die than live in this condition; I will take the chances;" which, I assured him, were *decidedly* in his favor.

April 10th.—General as well as local improvement. Have continued use of bougie No. 18 every three to five days (always under ether), as well as tonic treatment above indicated. Urine cloudy, "yellow," acid, 1012, abundance of pus, 1-24 (vol.) albumen (due to dissolved pus, in great part). To have warm hip-bath this evening. To-morrow morn (8½ o'clock) to have quinia (3ss), morph. (gr. ss), and digitalis (℥v viij).

April 11th, 10 A. M.—Pulse 96 (nervous excitement); temp. (tongue) 97.8° F.

Dr. B. W. Dyer assisting, patient under ether (one hour consumed in anæsthetizing, on account of frequent suspension of respiration, requiring gr. 1-60 strychnia hypodermically), I divided all the strictures but the last three to No. 34, using Otis' dilating—urethratome, large blade, and the meatus to No. 35 with meatatome. [On Dec. 7, 1880, I had again made a thorough exploration of the urethra, finding strictures at

Location.	Calibre.	Form.	Character.
1½ inch,	No. 13,	Annular,	Dilatable.
2⅛ to 2¼ "	" 14,	Tunnel,	Gristly, highly resilient.
2⅝ "	" 14,	Annular,	Fibrous.
3 "	" 15,	"	"
3¾ "	" 14,	"	"
4⅛ to 4⅝ "	" 13,	Tunnel,	Gristly, highly resilient.
5¼ "	" 13,	Annular,	Dilatable.

Size of penis = 3¼ inches; corresponding size urethra = No. 32.] Very moderate bleeding; at once controlled by pressure and sponging with cold water. Carbolyzed plug within meatus; carbolyzed oil and absorbent-cotton dressing. To take quinia (Ḑi), morphia (gr. ⅓), and digitalis (tinct. = ℥v) at 1 P. M. At 5 P. M. take ℥v tr. digitalis.

Recovered well from ether. Had a severe chill from 4.43 to 5.15 P. M., having urinated at 4 P. M., very moderate bleeding, but pain quite severe. Had quinia, morphia and digitalis at once, with additional morphia for pain. 9 P. M.: Has urinated twice since 4 P. M., less pain, but moderate bleeding. Very comfortable. Pulse 84, full, strong; temp. 98.2° F.

April 12th.—Good night ; urinates about every two hours ; bloody till last time this morning. Urine : acid, 1016, full of pus, no blood, $\frac{1}{4}$ albumen (renal congestion) ; no head or other bad symptoms. Quinia, morph. and digitalis treatment, with cream, milk and Vichy.

April 13th.—Slept well ; urine : acid, 1020, pus, 1-10 albumen. 10 P. M. : pulse 72, temp. 97.8° F. Thoroughly under digitalis, (constant nausea).

14th.—Doing excellently ; takes plenty of milk and cream. Medicaments as before, but less digitalis. No nausea. Urine : acid, 1012, pus, 1-15 albumen.

15th.—To-day (96 hours after operation) for first time passed sound (straight) No. 33 down to stricture at $3\frac{3}{4}$ in. with ease (under ether). Very moderate bleeding.

23d.—Sound passed every day but yesterday. Appetite excellent and general condition good. For the twelve days since the operation the patient has taken : Quinia, grs. 675 ; morphia, $11\frac{2}{3}$ grs. ; tr. digitalis, $\mathfrak{M}$ 136. Slept well last night. Bright and cheerful this morning. Urine : 1-9 (vol.) albumen.

At this 8 A. M. had quinia, gr. xv, cinchonix sulph., gr. xv, morphia, gr. $\frac{1}{3}$, and digitalis, $\mathfrak{M}$ viij.

At 10.35 began etherization ; stoppage of respiration as before, hypodermic of strychnia gr. 1-60, anæsthetization complete at 11.20. Dr. B. W. Dyer again assisting, divided all but the stricture at $5\frac{1}{4}$ inches thoroughly to No. 33.

Very little hemorrhage. Bougie á boule No. 32 passes easily down to $5\frac{1}{4}$ inches ; No. 21 bougie á boule passes contraction at this point. Carbolized instruments, sponges, and dressing, as at former operation. On recovering from ether, pain so great as to require hypodermic of gr. ss morphia.

Same treatment as before pursued, only pushed the digitalis more rapidly and to utmost physiological effect.

26th.—Introduced straight sound daily to $3\frac{3}{4}$ inches. To-day the same, and No. 30 curved sound into bladder. Ether. Very little bleeding. Urine : only a trace of albumen. No chill after this operation.

27th.—Sound No. 33 to $3\frac{3}{4}$ inches; sound No. 32 into bladder (ether). Only *drops* pass through the fistulæ; large urethral stream. Good appetite. Sleeps well. No suffering whatever. Has had, on average, each day, quinia (or cinchoniz sulph.) gr. xlv; tr. digitalis $\mathbb{M}$ x; morph. gr. $\frac{2}{3}$.

May 2d.—Unretarded progress, sounds passed daily, always under ether. Eats and sleeps well. Very cheerful. Urine passes in excellent stream, *none through fistulæ*. To-day and henceforth sound No. 32 only. Has averaged, daily: cinchon. sulph. 3i; morph. gr. ss; tr. digitalis, $\mathbb{M}$ xiv. Sat up yesterday; out in coach to-day.

16th.—Urine: only trace of albumen. Went out walking on the 4th inst. and daily since. Sound passed every day or alternate days; ether. Cinchon., sulph. only, 3ss daily. Digitalis and morphia discontinued. On 7th began upon acid benzoic., $\mathfrak{D}$ i thrice daily. On 11th inst. took too much exercise in park, which caused a temporary elevation of temperature, *malaise*, headache. Increased doses of quinia (substituted for cinch. sulph.) removed symptoms. All local induration gone some days since.

The highest pulse following the first operation	88.
“ “ “ “ “ second operation.....	76.
“ “ temperature following the first operation.....	98.2° F.
“ “ “ “ “ second operation	98.3° F.

20th.—Discontinue ammon. benzoas, substitute gtt. xv ol. eucalypt. three times daily.

During June sound passed every four or five days.

“ July sound passed every week to ten days.

“ August sound passed every two weeks.

“ September sound passed twice.

“ October sound passed twice.

A slight accumulation of pus found in track of second fistula, which I opened on Oct. 21st, letting out a few drops of pus. Syringing and cleanliness.

Sound passed twice during November, when remaining fistula completely healed up. A week later the scrotum and perinæum normally soft. Sound passed at intervals of four to five weeks since, always under ether. Discontinued ol. eucalyp. in July; no special benefit. Patient has enjoyed most complete health since a year ago, having an excellent complexion, good appetite and sleep, gained in flesh, and able to enjoy life with his fellow-beings. Urinates about six times daily; splendid stream. Urine: acid, normal sp. gr., "yellow," very little pus, more mucus and epithelium, very faintest trace albumen (due to pus).

Sound No. 32 always passes through the urethra anterior to remaining stricture with the most perfect ease. Stricture at $5\frac{1}{4}$ in. still shows contractility, so I am indisposed to allow a longer interval between the introductions than five weeks, at least at present. Patient takes long walks, attends to his business with the utmost regularity, in fine, is in the enjoyment of most robust health for a man of his years.

REMARKS.—Inasmuch as this case more fully illustrates the wonderful effects of complete division of urethral strictures than ordinary cases met in practice, there are a few points connected herewith which seem to me to be worthy of special mention.

First, the cause was not only gonorrhœal, but traumatic as regards the contraction at $4\frac{1}{8}$ to $4\frac{3}{8}$ inches, which accounts for its highly cartilaginous and resilient nature.

Right here it might be well to call attention to the utter inefficiency of the incomplete division of the existing strictures by Dr. Buck, since methodically frequent use of bougies was required to maintain even imperfect patency of the canal. Worse still in its ulterior effects was Holt's operation, which undoubtedly greatly added to the irritability and resiliency.

The patient's own attempt at passing a bougie resulted in making a false passage, through which a few drops of urine became extravasated, giving rise to the first abscess and fistula, which so readily healed under appropriate dilatation.

On account of disinclination to submit to other than the simplest measures continuous, followed by simple dilatation, was employed as holding out the best prospect of such relief as would be permanent, if the requisite of such treatment was complied with, namely, regular use of sound at stated, short intervals. The reflex vaso-motor effects of a damaged urethra, in the way of "ague-attacks," were especially remarkable. Half-drachm doses of potassium bromide frequently had the effect of preventing or cutting them short.

When the patient presented himself in August, 1880, no operative measures were to be entertained. The desideratum was to give as much local relief as possible by the gentlest means, and to build up the general health so that he would be prepared for a radical cure of his strictures (saving the last). This treatment was very slow and tedious, and marked by most discouraging complications.

If evidence of the total—aye disastrous—inefficacy of dilatation in any form were needed to induce surgeons to abandon it in all but the simplest cases of "penile" contractions (of large calibre) of the urethra, it seems to me that cases like the present should furnish the missing link. Abscesses, fistulæ, constant pain, severe vesical catarrh, and indirect pressure upon the kidneys—surely 'tis a sad picture to look upon.

Behold, on the other hand, the almost miraculous relief afforded by an operation which restores the urethral canal to its normal calibre.

That Dr. Otis has given the profession an operation (and instrument) which, if rightly performed, is capable of absolutely curing "penile," urethral strictures will not be denied by those who have followed the old views and practices (notably those formerly taught by Sir Henry Thompson) and they those advocated by the New York reformer.

I can add nothing of interest to what has been better said by the distinguished professor in regard to the details and requirements necessary to the obtainance of perfect results.

I simply draw attention to the fact that in the case here reported the urethra anterior to $5\frac{1}{4}$ inches is as smooth and free from all tendency to recontraction as an undamaged urethra of a perfectly healthy man. Nor is this the result in a single case only; since I exposed the theory and practice marked out by Dr. Otis, this perfect result has been the rule in a series of many cases extending over a period of nearly four and a half years.

There are some points connected with preparatory and after-treatment in operating which I consider important in securing successful issues.

First, as regards preparatory treatment. I think it highly essential to the prevention of complications for the patient not only to be "built up," but to be thoroughly submitted to the physiological influence of quinia (or cinchonia) for at least three days prior to the operation. About one hour and a half previous to the latter I invariably have the patient take from gr. xv to xxx of quinia, gr. $\frac{1}{4}$ to $\frac{1}{3}$ of morphia, and in cases where there is the faintest suspicion of previous or present disturbed renal function, a full dose of digitalis (tincture or infusion). This same dose to be repeated as soon after the operation as the state of the patient's stomach may allow. Nor do I end this prophylactic treatment here; in all but the simplest cases (meatotomy) I maintain a mild cinchonism (with or without morphia), for five to seven days. In cases of apprehended renal trouble I also give digitalis in doses to maintain mild physiological effects. Under this regimen my patients have no chills, fever (of any consequence), or other disagreeable complications (excepting the chill after the first operation in this case). I believe the notable absence of even a single bad symptom in this case was due to the special preparatory and after-treatment; indeed, I doubt not it warded off possible serious complications. A rule of paramount importance, in my opinion, is the non-introduction of a sound, or other meddling with the urethra, sooner than seventy-two, better ninety-six, hours after the operation.

If thorough division of the strictures have been performed, there will be no necessity for an earlier use of the sound. Finally, let us fully appreciate the benefits conferred by the operation upon this patient—re-establishment of robust health, removal of all danger to the kidneys, freedom from pain, and reduction of pus in the urine to almost *nil*.

There is but one regret, namely, that a removal of all contractions by division of the posterior stricture is inexpedient by reason of the very considerable risk to be incurred.

Let us hope that ere long we may learn of a comparatively safe method of *completely* dividing strictures located at the "membranous" urethra. Divulsion I reject as of eventual injury, though, may be, of temporary good.

Electrolysis requires further investigation as a *curative* agent.

PHYSIOLOGICAL ACTION OF SPINAL ACCESSORY DEMONSTRATED BY INJURY OF ITS FILAMENTS.

REPORTED BY W. S. TREMAINE, M. D., U. S. A.

W. G. T., a deputy United States marshal, was wounded in several places by a long, sharp pen-knife. A wound of the arm had become irritated by some application made to it by a quack. He then sent for me, and while examining his injuries I noticed he spoke in a hoarse whisper. He informed me that he lost his voice immediately after receiving his wounds. Closer examination revealed a small punctured wound on the right side of the neck, into which a probe could be introduced for about an inch. An injury to the pneumogastric at once suggested itself. Examination with the laryngoscope revealed the true state of the case: the right vocal cord was immovable on phonation, due, of course, to paralysis of the arytenoid, lateral, crico-arytenoid and thyro-arytenoid muscles. A constant current was applied by means of a laryngeal electrode daily for some weeks. Mr. T. was obliged, by his business, to leave my vicinity. I advised him to go to New York and consult my friend, Professor Clin-

ton Wagner. This he promised to do when his business would permit, in the following autumn.

I saw nothing more of him for about four months, when he returned and informed me that he had fully recovered the use of his voice. I then examined him with the laryngoscope and found motion fully restored to the paralyzed muscles.

REMARKS.—It is not often that physiological functions are so accurately demonstrated in the living body, the point of interest being the localization of the injury to filaments of the spinal accessory.

In 1832 Bischoff demonstrated the influence of this nerve in phonation, afterwards confirmed by repeated and conclusive experiments of Bernard. These experiments were, of course, conducted on the lower animals.

The filaments of the spinal accessory reach the muscles of the larynx by means of the recurrent laryngeal; as section of the latter interferes with respiratory movements, and as there was, in the case under consideration, no disturbance of these, I have thought the case worth reporting, as demonstrating the physiological action of the spinal accessory in the human being. It must, of course, be evident that such a case is rare. I therefore had a photograph taken, showing the exact situation of this wound.

A NEW TREATMENT FOR HEMORRHOIDS—A PILE PESSARY.

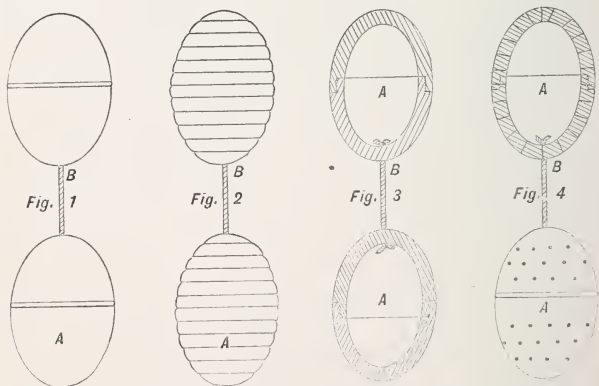
REPORTED BY THOMAS LOTHROP, M. D.

The sufferings attending a severe case of piles have excited the ingenuity of both the surgeon and the patient. The abhorrence of the knife or the ligature has driven many into the hands of quacks, or to the employment of nostrums, with the almost invariable result of failure and consequent despair.

The device which it is the object of this paper to bring before the profession was the outcome of an attack of this malady in the person of a prominent merchant of this city, who, after suf-

fering for many months, and being almost incapacitated from business, resorted to the use of these pessaries with the result of almost complete relief. The principle upon which the pessaries acts is that of pressure upon the distended hemorrhoidal veins and the support given to the relaxed rectal walls. This same principle is utilized in the treatment of uterine displacements, and, when wisely directed, is productive of good results. Its application to the diseases of the rectum is certainly philosophical, and, judging from its success in the case above referred to, is worthy of the attention of the profession.

The accompanying cuts will give the reader an idea of the form and size of the pessary here recommended. They are olive-shaped, and can be made of wood, celluloid, ivory, or hard rubber.



No. 1 *A* is solid; No. 2 *A* is solid, and corrugated on its surface; No. 3 *A* is hollow, and smooth on its surface; No. 4 is hollow and perforated. The pessaries are united by a silk thread, *B*.

The directions for the use and application of these pessaries are as follows: After the bowels have been moved, the patient

inserts the first pessary, and the second ball follows immediately. The hemorrhoids are thus pushed up in their proper place, the second pessary preventing the expulsion either of the pessary or of the hemorrhoid, the muscles apparently clasping the two pessaries around and between them, holding them in place and preventing the enlarged veins from falling. In case of obstinate constipation, the corrugated pessary is used. When the parts are inflamed, the use of cold water in the hollow pessaries affords relief. When the rectum has become relaxed, the use of some astringent ointment, as Ung. Gallæ Co., in the hollow-perforated pessary, is indicated. The pessaries are to be removed daily, and carefully cleansed.

It is not known to the writer whether originality is claimed by the patient for this ingenious device, but it matters not, if the principle here adopted is as applicable to diseases of the lower end of the rectum as it has been found to be in uterine displacements. Judged from its success in this case, the profession may well utilize these measures in the treatment of an often intractable disorder, and, by modification of the pessary in size and form, afford to the enlarged hemorrhoidal veins, and to the relaxed and often protruding rectal walls, needed pressure and support.

The cost of the pessaries is trifling, and it is apparent that their use will often bring coveted relief. The idea has been explained to several of our prominent physicians, who, while not having any experience in its application to the malady for which the pessaries are intended, endorse the principle upon which they are based. We ask the profession to utilize the hint here given and seek to bestow relief through this simple agency to a class of cases which, heretofore, have tested their ingenuity.

Selections.

SICK HEADACHE.

Surgeon Major Roehring, of Amberg, reports in No. 32 of the *Allg. Med. Centr. Zeit.*, April 22, 1882, a case of headache of long standing, which he cured by salycilate of sodium, which confirms the observation of Dr. Oehlschlager, of Danzig, who first contended that we possessed in salicylic acid one of the most reliable remedies for neuralgia. This cannot astonish us if we remember that the action of salicylic acid is, in more than one respect, and especially in its influence on the nervous centres, analogous to quinine.

While out with the troops on manœuvre, Dr. Roehring was called to visit the sixteen year old son of a poor peasant family, in a neighboring village. The boy, who had shown himself very diligent at school, had been suffering from his sixth year, several days every week, from the most intense headache, which had not been relieved by any of the many remedies tried for this purpose. A careful examination did not reveal any organic lesion or any cause for the pain, which seemed to be neuralgic in character, a purely nervous headache. Roehring had just been reading the observations of Oehlschlager, and knowing from the names of the physicians who had been already attending the poor boy that all the common remedies for neuralgia had been given a fair trial, thought this a good opportunity to test the virtue of salycilate of sodium. He gave the boy, who, in consequence of the severity of the pain was not able to leave his bed, ten grains of the remedy every three hours, and was surprised to see the patient the next day in his tent and with smiling face. The boy admitted that he for years had not been feeling so well as he did then. The remedy was continued, but in less frequent doses, for a few days longer; the headache did not return. Several months later Dr. Roehring wrote to the

school teacher of the boy, and was informed that the latter had, during all this time, been totally free of his former pain, that he was much brighter than formerly, and evidently enjoying the best of health. It may be worth while to give the remedy a more extensive trial, and the more so, as we are only too often at a loss what to do in stubborn cases of so-called nervous headache.—*Med. and Surg. Jour.*

PULVIS DOVERI.

People whose "inward griefs and peristaltic woes" have been relieved by the powder of Dover, do not generally know to whom they are indebted for this excellent compound. Doctor Dover was a friend and probably pupil of the great Sydenham. He commenced practice in Bristol, where, having made some money, he longed to make more. The Roll of the College of Physicians tells us that he joined with some merchants in fitting out two privateers for the South Seas, in one of which, the "Duke," he himself sailed from Bristol, August 2, 1708. On the passage out they touched at the Island of Juan Fernandez, where Dover, on the 2d of February, 1709, found Alexander Selkirk, who had been alone on the island for four years and four months, and whom Dover brought away in the "Duke." In the April following, Dover took Ginaguil, a city or town of Peru, by storm. In December, 1709, the two privateers took a large and valuable prize, a ship of 20 guns and 190 men, in which Dover removed from the "Duke," taking Alexander Selkirk with him as master, and finally reaching England in October, 1711. After this cruise Dr. Dover removed to London, where his practice soon became great. His patients, and the apothecaries who wished to consult him, addressed their letters to the Jerusalem coffee house, where, at certain hours of the day, he received most of his patients.—*Can. Jour. of Med. Science.*

Editorial Correspondence.

PHILADELPHIA, November 20, 1882.

DEAR JOURNAL.—The assertion, that this is the medical and surgical centre of the new world, is looked upon by the members of the profession here as a truism, and a residence of a few weeks in this great city, with a daily round of its colleges and hospitals, is apt to make a stranger a convert to that idea, always excepting the New York city man, who is unwilling to admit that Philadelphia can equally compete with New York in anything pertaining to either learning, arts or commerce. As long, however, as the medical colleges of New York remain simply proprietary concerns, and the number of students, and the amount to be obtained from graduation fees, is in any sense a primary object with their faculties, so long will the unprejudiced medical man, other things being equal, yield the palm to Philadelphia with its one independent university, which has for years bravely insisted upon a full three years' course of study in its halls, and that in the face of the unworthy competition of a college so great and famous in the medical history of the country as "Jefferson." As with Bellevue, so with her, present prosperity and large emoluments to its professors offer too great a temptation, when, on the other hand, nothing is to be gained but the elevation of the profession by the thorough training of candidates for its honors and the weeding out, by a reasonable preliminary examination, of men entirely unqualified for the exercise of its high duties. That the adhesion to the old plan of requiring but two years' attendance upon the lectures is wise, in a "purely business" point of view, is demonstrated by the immense class at "Jefferson"—so large, indeed, that in the lower lecture room, especially, the students occupying the back seats are at a serious disadvantage. It strikes one as ludicrous to see many of these unfortunates using opera glasses, perhaps to see who was lecturing, but they ought also to be provided with ear trumpets, for some of the professors do not

speaking loud enough to be heard in the distant seats. It is an encouraging sign, however, that, notwithstanding the three years' graded course and the preliminary examination (which is, by the way, not yet sufficiently rigorous), the roomy halls of the "University of Pennsylvania" are well filled with students. Certainly, those availing themselves of its advantages, can hardly fail to acquire a knowledge of medicine which will give them a decided advantage in the race for professional success and honors in the years to come. The teaching strikes an observer as eminently practical and thorough, and the admirable buildings, occupied by the medical department, provide ample accommodations for all departments. The chemical laboratory is exceptionally complete and well appointed, and in addition to this there are large halls, thoroughly furnished with all necessary appliances, for practical work in Histology, Physiology, Pathology, Experimental Therapeutics, Pharmacy, etc.

The dissecting room is peculiarly admirable. The ventilation is perfect, the light abundant, and the tables and floors so constructed that it can be, and is, kept clean and sweet. But the advantages offered by the university are not confined to the undergraduate. It was among the first to establish a post-graduate course. Under the direction of such men as Profs. Pepper, Goodell, H. C. Wood, Duhring, Ashhurst, and others of national reputation, this course has attracted medical men from all sections of the country, and indeed among the many excellent post-graduate schools which have lately been established in New York, Chicago, St. Louis, and elsewhere, it is doubtful if any have the facilities for this kind of instruction that the University of Pennsylvania enjoys. Within a few blocks of the university are located, 1st, the Philadelphia Hospital, with one thousand beds, which is, during the winter months, at least, filled to overflowing, and which provides an unlimited amount of material for clinical instruction; 2d, the University Hospital, an elegant and commodious building, constructed according to the best-established principles of hospital architecture, and pro-

vided with all the appliances pertaining to such institutions of the first class. Clinical lectures are delivered daily in its amphitheatre and wards, in addition to the special bed-side instruction to the post-graduate class; 3d, the Children's Hospital, an admirably-conducted institution, which appears to meet with much favor from the good people of this city, the poor little invalids receiving the most careful attention and every possible comfort; 4th, numerous dispensaries, with which the teachers of the post-graduate course are connected, and which are, therefore, open to the members of the class. In addition to these special advantages for clinical instruction, the course is so arranged as to leave the members free to attend the general clinics on Wednesdays and Saturdays, from 9 A. M. to 2 P. M., at the hospitals, which are held by such eminent teachers as Profs. Pepper, Agnew, H. C. Wood, Bartholow, Da Costa, Goodell, Pancoast, and others. Indeed, the only difficulty one experiences here is to find time to avail himself of the opportunities open to him.

An interesting episode at a late clinic at the Philadelphia Hospital was the introduction, by Dr. Pancoast, of a young man who figured in an important surgical operation twenty-four years ago. His face showed a deep scar on the left cheek. "This," said Dr. Pancoast, "was caused by the removal of another child, which, at birth, was attached to his cheek." A photograph was shown, taken when the young man was an infant of seven months, and before the operation. It represented a baby with an imperfectly-developed foetus (having hands, feet and trunk, but no head) attached to its left cheek, and rather more than half the size of the child. The operation for its removal was performed by the elder Dr. Pancoast at a clinic in Jefferson College, twenty-four years ago. It was witnessed by Drs. Gross, Leidy, Dunglison, and many others, and at that time was considered a very hazardous operation. The section was made with an ecraseur, then a new instrument, the one employed having been brought from Europe by Dr. Pancoast,

and the first of the kind ever used in America. The wisdom and success of the operation was demonstrated by the presence of the young man at this clinic, a quarter of a century later.

The monstrosity, upon dissection, was found to be provided with heart and gastro-alimentary tract, as well as the members already referred to.

No little stir was recently excited here by the action of a member of the obstetrical staff of Philadelphia Hospital, in bringing before the class an etherized patient in labor and delivering her, with the aid of forceps. The woman had been in labor nine hours. The os was widely dilated, but the head refused to engage. The application of the forceps was necessary, and no additional risk to the patient was involved by the delivery in the amphitheatre. Nevertheless, the Hospital Committee met and passed resolutions recommending to the Board the summary dismissal of the physician on account of his action. The matter became public and a vast amount of indignation and sentimental gush was indulged in.

The medical men on the Board were this time, however, true to their colors, and the medical staff of the hospital joined in a protest so strong and unanimous that the Board reconsidered its hasty action. It is hard, at least for a medical man, to see why (it being taken for granted that the conditions are such as to involve no additional risk to the woman) there should be any objection to bringing an obstetric case before the class, and none to the every-day occurrence of the various gynecological operations. It has been the custom for years in all the large hospitals and schools in Europe to give this kind of instruction whenever possible, and very properly so, for there is no department of medicine in which it is of so great importance for the welfare of women, and consequently for humanity, that the young graduate should possess a practical knowledge as that of obstetrics. In other departments he is very unlikely to have thrown upon him any very critical and important case, without the possibility

of getting professional experience to support and advise him. But the young doctor's first case of obstetrics may be one in which the life of the mother and child will depend upon his knowledge and skill, and if in the country, he may be out of reach of counsel and have to depend wholly upon himself. That objection should be made to clinical teaching in obstetrics *here* is the more extraordinary when we know that in many of our western colleges such clinics are held without objection from any quarter, and are now regarded as an established and necessary feature of obstetric teaching.

The profession here is fortunate in possessing (what we so greatly need in Buffalo) a well-arranged and centrally-located building, known as the "College of Physicians," at which the various medical societies hold their meetings. A very good library occupies one floor and seems to be well supported. I propose to get the details of its management for the possible benefit of our own medical library, now in the formation stage. I was present at a meeting of the "Pathological Society," of which Dr. Tyson is now President. Dr. Nancrede exhibited a mixomatous tumor of the posterior cervical region; Dr. Bruen, a specimen of carcinoma of pancreas and liver, remarkable in that it occurred in a patient 24 years of age; Dr. Tyson, a pair of chronically-inflamed kidneys from a patient who had died of phthisis pulmonalis. Several other specimens were exhibited, not of any particular interest and the "discussion" was not in any way noteworthy. Indeed, the meetings of the Buffalo Association are, as a rule, more spirited and interesting. The younger Gross read his address as retiring President. It was a brief review of the Society's work during his term of office and did not indicate any very great interest in pathological investigation on the part of the professors of the city.

To-day I had the pleasure of witnessing Prof. Goodell make an ovariectomy. The operation was a simple one and there was nothing particularly noteworthy in his method. That he is a skillful and careful operator, goes without saying. He uses the

spray solution, 5 per cent., and keeps all the instruments to be employed immersed in a tray of carbolized water. The pedicle in this case was very small and was ligated and returned. A large number of sutures was employed in closing the abdominal wound, the distance between each being less than $\frac{1}{2}$ an inch. No drainage tube was inserted.

The dispensaries, which are numerous, seem to be in possession of abundant means. The great number of people bearing evidences of enjoying a condition very far from poverty, strikes one very forcibly. Indeed, I rarely see one who, unless appearances are deceptive, could not pay for the attendance of a physician. Apparently, however, no questions are asked, and the applicant not only receives advice, but also medicine, free. Such a system must seriously injure the younger men here who are not connected with the dispensaries. The only excuse for such a misdirection of medical charity is that the patients presenting themselves are largely utilized for clinical teaching.

I have not spoken of another of the great hospitals of the city, viz., Jefferson College Hospital, because I have not yet had time to pay it a visit. I have attended the lectures of Profs. Bartholow and Da Costa, and I hope to give you my impression in another letter, but already, my dear editors, I imagine I hear the familiar comment, "too long," which usually precedes the consignment of communications to limbo. A. R. D.

MALARIA IN SKIN DISEASES—A CORRECTION.

MESSRS. EDITORS:—Some time since, the following paragraph appeared in the *Michigan Medical News*, and has been widely copied in the medical journals of the country:

A century ago John Hunter divided all skin diseases into three classes, one of which is cured by mercury and the iodides, a second by sulphur, and a third class which the devil himself can't cure. Dr. L. P. Yandell, who quotes Hunter as above, is given credit for a much less complex classification than even this. He attributes all skin eruptions to malaria. Quinine is a specific for malaria; ergo, quinine is the remedy for all skin eruptions. Q. E. D.

I trust that my confreres of the press will do me the kindness and the justice to publish the correction now given, as the matter is not only one of personal interest to the writer, but is of scientific interest to the profession. The subjoined extracts are from a supplement to a report read to the American Dermatological Association, September, 1877. A copy of this report will be gladly sent to any one desiring it:

"From the criticisms which have been made on my views, I find that I have not succeeded in making myself perfectly understood. What I have contended for, and what I have reiterated, is simply this: Malaria is *the chief source* of *acute* skin disease. Scrofula is *the chief source* of *chronic* skin disease. The more inveterate cases of skin disease are often due to the co-existence of these two things. The specific exanthems, of course, are not included here, but I contend that their progress and termination are often largely influenced by the presence of malaria, or struma. *I do not claim* that malaria and struma are the *sole* causes of the dermatoses. Indeed, *many* of the dermatoses may exist *independently* of *malaria* or *struma*, and most frequently some exciting cause is necessary to develop the cutaneous eruption. Among the exciting causes are irritants, injuries, insufficient or improper ingesta, vicissitudes of temperature, alcohol, dentition, menstruation, parturition, lactation, etc. The proofs of the truth of my views are, in the first place, that the diseases of the skin are cured more certainly and more quickly by the anti-malarial remedies on the one hand, and by the anti-strumous on the other, than can be done by any other line of therapeutics; and in the second place, that careful and painstaking investigation will, in the majority of dermatoses, make apparent the existence of the malaria or the struma, as the case may be.

"In conclusion, I desire to impress upon the reader that my views *are not confined to the skin diseases*. What produces disease here will produce it in all other organs of the body.

What is true of dermatology is equally true of gynecology and ophthalmology and otology, and it is just as true of the diseases of all the other regions of the body."

Subsequent observation has confirmed my belief in the correctness of these views.

LUNSFORD P. YANDELL.

Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Regular Meeting, November 6th, 1882.

Vice-President, Dr. J. Cronyn, in the Chair. Dr. C. M. Daniels, Secretary.

Present—Drs. Cary, Stockton, Wyckoff, Hartwig, Hauenstein, Barrett, Harvey, Fowler, Bartlett, Strong, and, by invitation, Drs. Hill, Frank, Wall, Clark, Frederick, Long, Pryor and Thornton.

Upon motion, the reading of the minutes of the last regular meeting was dispensed with.

Application for membership was received from Dr. Chas. A. Wall, who was duly elected.

The Secretary read a letter from the essayist for the evening, Dr. W. S. Tremaine, stating that it would be impossible for him to attend, on account of illness. Upon motion, it was decided to await his recovery before discussing the subject, "Strictures of the Urethra," that he was to present.

Prevailing Diseases—Dr. Hauenstein had nothing special to report, except occasional cases of scarlatina and diphtheria.

Dr. Bartlett presented a similar report, and had noted several cases having enlarged cervical glands, also that dropsical tendencies were more than usually prevalent, even under the best of hygienic surroundings.

Miscellaneous Business—Dr. Hartwig asked that where patients were presented before the Association, such might be seen before the regular order of business.

Dr. Cronyn replied that he considered the best way would be for those desiring to present patients to advise the Secretary in advance, and special action could be taken at any individual meeting which would not necessitate any change in the by-laws.

Dr. Wyckoff asked why the hour of meeting had been changed to a quarter past eight, instead of earlier as had been the custom heretofore.

The Secretary stated that it was deemed advisable to make the change to accommodate those physicians who had the usual evening office hours, from seven to eight o'clock.

CLAYTON M. DANIELS, *Secretary.*

Editorial.

OUR PUBLIC INSTITUTIONS.

Following up the criticisms in which we have indulged, heretofore, of the public institutions of Buffalo, we are induced to refer to the excellent report of the medical officer, Dr. Stockton, of the Penitentiary, located in this city, in which he gives not only an account of his stewardship, but also offers some valuable suggestions in regard to the peculiar class that naturally gravitate to our penal institutions.

Several important recommendations are offered, which we endorse, inasmuch as they involve recognized principles in sanitary science. After referring in a complimentary manner to the ventilation, diet, cleanliness, hours of labor, etc., the report emphasizes the importance of "an isolation ward" for the proper care of "those afflicted with contagious diseases." The prevention of the spread of contagious diseases through isolation is one of the most essential measures now urged by sanitarians, and it cannot be questioned that in an institution to which is sent a class taken from the "slums" of a large city, suitable measures for separation should necessarily supplement the strict attention directed to personal cleanliness, diet, ventilation, etc. This measure should receive the prompt attention of the proper authorities.

We are glad to recognize the movement in favor of a resident medical attendant, and the value of a system of daily reports of cases, with the treatment adopted. This principle has been so far successful in other institutions, especially those devoted to the care of the insane, that the feasibility of its adoption cannot be questioned. The efforts of the State Board of Charities, to secure the appointment of a medical superintendent to our County Insane Asylum, are based upon the same principle and are substantiated by a like experience. The profession endorse the system of superintendence by educated officials of such institutions.

The necessity of more direct medical supervision than can be given through occasional visits by the non-resident medical officer, among so many prisoners as are confined in our Penitentiary, is very plain.

Upon the subject of short sentences for offenses, such as drunkenness, etc., the report says: "These people are seldom in a fit condition to labor when received, and many of them, during the entire period of their confinement, are carefully fed, reasonably well nursed, and also doctored, and have grown to look upon the institution not in the light of a workhouse or a penitentiary, but a kind of refuge place where they may resort for the process of "bracing up," that they may go out and sin and be sick again. Whether the present plan of sending such to this institution has in view either humanity or the public good, is a question not unworthy of the consideration of the proper persons. These people go out not sufficiently strengthened physically, not to say morally, to resist the influences that eventuate their return; and it would seem to me advisable that they be not sent here at all, or else that their term of confinement be sufficiently lengthened to do themselves and the county good."

This subject is a suggestive one, not so much to the profession as to the philanthropist, who desires to witness, as an outcome of existing punitive measures and agencies, some

evidences of reformation or improvement in the lives and character of the misguided and the erring. The medical profession are too apt to estimate results obtained only through the application of principles of sanitary or medical science. The report incidently hints at the influence of physical strength over the moral sense; and it is too much to expect these victims of crime and dissipation to be improved, when neither time nor surrounding influences are allowed or granted for their physical and moral reformation.

As a whole, the report is the most suggestive and valuable one we have received from any of the public institutions of our city, and it is for this reason that we have taken occasion to refer to it at length. It is to be hoped that its recommendation will receive deserved attention from the Board of Supervisors. In the growth of our city in wealth and population, public officials must recognize the necessity of a broader liberality in dealing with its varied interests; and in the cause of humanity there is no excuse for parsimony in the provision offered for the amelioration of the condition of either the pauper or the criminal classes of the community.

EDITORIAL NOTES.

HERBERT SPENCER did real missionary work in preaching to us restless Americans the gospel of relaxation. It now behooves physicians here to sanction such teaching, and say amen to the words of this eminent philosopher. If holidays were more frequent, we should hear less of many forms of nervous diseases already too common.

THE Anglo-Swiss Condensed Milk Co. supply the profession with the best and most reliable quality of condensed milk. The value of a certain standard and quality of milk, for the use of infants especially, is a recognized want, which is happily supplied by the article furnished by this company. We recommend it, and base our opinion upon rather an extensive use of the article.

IN a former article we have already made a plea for the introduction and employment of the metrical system by physicians.

THE writer has employed it exclusively for a period of nearly two years and is more than satisfied with the change. We regret to see that the adoption has not become more universal. It is a duty which physicians owe to the progress of science, and we hope that this step in advance will no longer be delayed.

WE chronicle, with pleasure, the return to our city of Dr. Frederick Peterson from a sojourn of eighteen months in Europe. The interesting correspondence published in the JOURNAL from his pen demonstrates the aptitude of our friend in his professional studies and as a close observer of medical customs and thought in the great medical centres which he visited. We anticipate for Dr. Peterson a brilliant career and an abundant success in his profession.

DIFFERING DOCTORS AT ALBANY.—As the time draws near for the meeting in Albany, having in view the discussion of the important question in medical ethics, it is evident that there will be such an assemblage of forces on both sides as will serve to thoroughly test the advisability of the recent innovation in a long-established code. An interesting debate may be expected, and the ardent supporters of each faction must whet their swords for a vigorous combat.

IF Buffalo physicians realized how instructive are some of the meetings of local scientific societies, they would attend them more frequently. Quite a number are already active members of the Microscopical Club, and consequently topics are frequently brought up, for discussion there, which are intimately related to medicine. It is by thus enlarging the field of study that a man makes his own daily observations, more exactly for his patient and satisfactorily for himself.

THE friends of Dr. S. F. Mixer will heartily congratulate him on the pleasant trip he has in prospect to the Pacific slope. It is to be hoped the genial climate of Southern California will prove all the benefit anticipated, and that he will return home refreshed, mentally and physically, by his tour of several months. At the same time such a prolonged absence will leave a void in the medical circle, not easily filled; though we welcome most warmly to our midst the young physician who assumes his duties during the interval.

WE call attention to the interesting correspondence from our editorial confrere who is now enjoying the advantages of rest and study in Philadelphia. The observations made in regard to the wide range and extent of clinical instruction in that great medical centre are ably presented, and, we doubt not, will be attentively perused by the profession. It is becoming more evident that we need not seek foreign advantages for professional improvement, while so much is to be had at home; and we gladly chronicle the portrayal of these facilities from so able a pen.

THE New York Polyclinic, modeled after the celebrated Polyclinic of Vienna, has at length been established. If we may judge from rather an enthusiastic editorial in a late number of the *Medical Gazette*, the members of the profession need not seek the advantages of its celebrated prototype, for much superior instruction and instructors are found at home. We join in congratulations for any movement which provides improved facilities for, and an elevation of the standard of medical education. If ably managed, no doubt need be entertained of its success. The profession are prepared for yet greater advances than the schools are inclined to make. This and every other step in our system of medical education will be watched with jealous care, and, if well founded, will receive a liberal support.

THE PRESIDENT'S PHYSICIANS.—The pitiful wrangle in Washington over the expenses of the late President's illness is certainly to be deplored by a right-minded community at large, yet, unfortunately, finds a parallel in almost every physician's experience. Who, in the profession, does not know—when disease has claimed a patient—of the confidence implied, the unbounded gratitude expressed, for services being rendered? And who does not remember how the tone of all interested altered when recovery, or, less happily, death made those services no longer a matter of vital importance? In the case in question, the eminent position occupied by the majority of the medical men is, or ought to be, a sufficient guaranty that the charges were not in undue excess of the usual demand, and should, therefore, be cheerfully recognized by the proper authorities.

Reviews.

The Diseases of the Liver, with and without Jaundice, with Special Application of Physiological Chemistry to their Diagnosis and Treatment. By GEORGE HALLIDAY, M. D., F. R. S., Fellow College Physicians and Professor in University College, London. Illustrated by colored plates and wood engravings. Philadelphia: P. Blakiston, Son & Co., 1902. Walnut St. 1885.

This work is the outcome of a wide and varied study of the liver, both in health and in disease. It aims to base the diagnosis and treatment of hepatic diseases upon rational and scientific principles, by carrying physiological chemistry into the domain of medical science. The author emphasizes the value and importance of a knowledge of healthy function, and strives to trace morbid phenomena through the avenues afforded by the chemical analysis of the excretions. He believes that by this method we are entering upon an "important line of medical inquiry which, sooner or later, will be followed by valuable practical results." The older authors were unsatisfactory in their pathology and empirical in their treatment of hepatic diseases. They quite uniformly started off in their attempted elucidation of symptoms by enlarging upon the obscurity and vagueness of all diseases of the liver. The author of this work analyzes every disease, traceable to an altered condition of this important organ, by utilizing all the means which chemistry and physiology furnish. As a consequence, the work is the clearest and most satisfactory of any we have examined.

Inasmuch as the work is not intended for the medical student, but rather for medical men of experience and education, its author very wisely has added a chapter in which he summarizes the differential diagnosis of diseases of the liver, and thus condenses in a brief space the essential symptoms peculiar to each morbid condition. We regard this chapter to the busy practitioner a valuable addition, and it increases the real worth to those whose time is limited for study.

We need not refer further to other features of the work, which strike us favorably as we peruse its pages. In those sections of our country in which hepatic diseases prevail through climatic influences and causes, the profession can not afford to be without such an aid as this presents for their study and investigation. It is the most thoroughly scientific work ever offered to the profession in the diagnosis and treatment of diseases of the liver.

Pharmacopœia of the United States of America. Sixth Decennial Revision.

By authority of the National Convention for Revising the Pharmacopœia, held at Washington, D. C., 1880. New York: William Wood & Co. 1882.

On opening this valuable work, we are favored with a brief historical introduction of the measures adopted in the past for the formation of a National Pharmacopœia. In this important movement, inaugurated in January, 1817, by Dr. Lyman Spalding, who submitted to the Medical Society of the County of New York a project looking to this end, we find engaged, successively, such able Pharmacologists as Dr. Samuel L. Mitchell, who became President of the General Convention for the formation of a National Pharmacopœia in 1820; Dr. Lewis Condict, of New Jersey, who was President in 1830; Dr. Geo. B. Wood, President in 1850; Dr. Joseph Carson, in 1870. Following this historical introduction is the Abstract of the Proceedings of the National Convention of 1880 for Revising the Pharmacopœia, of which Dr. Robert Amory, of Massachusetts, was President. This convention, after laying out its work, made provision for calling a convention in 1890.

The work here presented is the most complete of any of its predecessors in the precision of its details, as well as in the extent of the subjects treated. It furnishes a complete Pharmacopœia, with the addition of all the new remedies presented during the last decade, with list of reagents or articles used in testing, table of thermometric equivalents, table of percentage and specific gravity, table of the solubility of chemicals in water and alcohol, saturation table, list of articles added to and dis-

missed from the Pharmacopœia, etc., etc. It will be seen that the work is a valuable addition to the literature of this important department of medicine. It is presented on good paper and excellent type, and reflects great credit upon the enterprising publishers.

A Guide to Therapeutics and Materia Medica. By ROBT. FARQUHARSON, M. D., Edin., F. R. C. P., Lond., late lecturer on Materia Medica at St. Mary's Hospital Medical School. Third American edition, revised by the author; enlarged and adapted to the U. S. Pharmacopœia by FRANK WOODBURY, M. D., Physician to the German, Hospital Philadelphia. H. C. Lea's Son & Co.

As "good wine needs no bush," "Farquharson's Therapeutics" needs no commendation. We are glad, however, to see a third edition issued under the editorship of Dr. Woodbury. In the previous edition he greatly added to the value of the work, to the American reader, by adapting it to our Pharmacopœia. In the present edition, in deference to the demands of of scientific progress, the metric system has been introduced in addition to the old form of writing prescriptions. The tests of the permanent poisons have also been inserted in the text, and a ready reference table of poisons at the end of the book.

The Principles and Practice of Surgery. By JOHN ASHHURST, JR., M. D., Professor of Clinical Surgery in the University of Pennsylvania, Senior Surgeon to the Children's Hospital, Consulting Surgeon to the Woman's Hospital, etc., etc. Third edition. Enlarged and thoroughly revised, with five hundred and fifty-five illustrations. Philadelphia: H. C. Lea's Son & Co. 1882.

The opinion, expressed in the first appearance of this great work, that it would take rank among the best works in surgery in the world, has been fully verified, and we are glad to see a third edition, the improvements in which are modestly referred to in the following extract from the preface: "The object of this work is, as its title indicates, to furnish, in as concise a manner as may be compatible with clearness, a condensed but comprehensive description of the modes of practice now generally employed in the treatment of surgical affections, with a

plain exposition of the principles upon which those modes of practice are based. In revising his work for a third edition, the author has spared no pains to render it worthy of a continuance of the favor with which it has heretofore been received, by incorporating in it an account of the more important recent observations in surgical science, and of such novelties in surgical practice as have seemed to him to be really improvements; and by making such changes as have been suggested to him by enlarged personal experience as a clinical teacher and hospital surgeon." To the general practitioner, who has not the time to give attention to the more minute and extended works, and to the medical student, we would most cordially commend it. Like all of Lea's books, it is an illustration of the perfection of book-making. The new style of half Russia binding is particularly attractive. The price of the book is very low; cloth, \$6.00; leather, \$7.00; half Russia, \$7.50.

The Medical Record Visiting List or Physician's Diary for 1883 New York: William Wood & Co.

This visiting list is issued in the usual style and will be found a valuable aid in the daily record it furnishes for the physician.

Handbook of Homœopathic Practice. By GEORGE M. OCKFORD, M. D. Chicago: Duncan Brothers. 1882.

In the preface of this work we learn that "one main object of the compilation of this handbook is to present, in a concise form, practical descriptions of the principal diseases and their treatment. It is a series of notes culled from the writings of foreign and American authorities, and is issued with the hope that it may prove useful to the student of homœopathy as well as to the busy practitioner to whom time is too valuable to ponder over the larger works of his library." The book is apparently what the preface leads us to expect. The symptoms of disease are, on the whole, concisely and correctly given. As to the treatment, our knowledge is limited and eclipsed by our skepticism. The chapter on mental disorders is particularly startling in its claims for the potency and applicability of drugs.

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CALCULOUS PYELITIS.*

A CLINICAL LECTURE DELIVERED AT THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA, DEC. 2, 1882.

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GENTLEMEN—You may remember that I brought before you, a few weeks ago, a man exhibiting the following symptoms: He was a middle-aged man, and had complained of frequent micturition and occasional attacks of pain in the left side extending towards the left groin, but without any symptoms of stone in the bladder. The urine, on standing, deposited a small amount of pus which was easily diffused. There was but little mucus. Examination with the microscope showed pus corpuscles and phosphates, but no tube-casts. The urine also contained albumen, but no more than could be explained by the amount of pus present. There was but little tenderness on pressure over the kidney, and he stated distinctly that jars and jolts to his body did not cause pain in the spot to which he referred his attacks of pain. This case seemed, as I then stated

*Specially Reported for the BUFFALO MEDICAL AND SURGICAL JOURNAL.

to you, to be one of calculous pyelitis, that is, inflammation of the pelvis of the kidney dependent upon the existence there of a calculus.

I pointed out to you that the symptoms of calculous pyelitis varied somewhat, according as the calculus remained in or had been expelled from the kidney; and secondly, as the calculus was large, irregular and very free to move and thus press upon and irritate the lining membrane, or as it was smooth or had become encysted so that it was almost like an inert body, and the inflammation which it had excited remained.

Different cases differ greatly in regard to the amount of pain. The pain is of two kinds. Sometimes there are only spells of renal colic, by which we mean sudden attacks of pain which appear in the region of one or the other kidneys, extending around under the short ribs, over the crest of the ilium, down into the groin, often associated with retraction of the testicle and pain at the end of the penis. These spells last a varying number of hours and vary much in severity, being sometimes a pretty bad pain, at other times being so severe that the patient is in a state of collapse, with cold extremities, pinched face, vomiting and agony, requiring the use of anæsthetics, or the hypodermic injection of morphia in order to afford any relief. In addition to these attacks of pain, there is a greater or less degree of tenderness on pressure and pain on shaking or jarring the body. Sometimes the tenderness on pressure is extreme, while at other times the deepest pressure will cause but little suffering. Not every attack of renal colic is attended with the passage of a calculus. It is due at times to a neuralgic paroxysm affecting the kidney, attended by a sensitive state of the organ, some congestion and a little derangement of the urine, or occasionally with the passage of fine urinary gravel. The attack of colic may be attended by the passage of a minute calculus. The pain is experienced while the stone is passing through the ureter. When it escapes into the bladder the patient may experience instant relief. Perhaps two or three days afterwards,

while urinating, he will hear something drop into the vessel, and on examining, he finds a minute calculus as large as a spring pea. Sometimes there will be an impediment in the urethra, but after a number of strong efforts a little calculus is passed. Attacks of colic may also be due to the presence in the pelvis of the kidney of a stone too large to pass through the ureter, but which occasionally stops up the orifice of the ureter, preventing the escape of the urine and causing spasm and pain which last for an indefinite time, and then as the stone shifts its position, the pain disappears, the urine escapes and the spell is over. The tenderness and pain on motion are dependent partly upon the inflammation of the lining of the pelvis and irritation of the kidney structure, and in some cases partly upon the presence of a calculus which can be moved and jarred, thus wounding the sensitive structures; according as there is or is not a calculus, according as the inflammation is acute or chronic, will be the amount of tenderness on pressure, and of pain on agitation.

Another symptom, which varies much in different cases, is hæmaturia, that is, the passage of blood from the penis. This is a common symptom. It occurs in disease of the lining of the bladder and of the neck of the bladder far more frequently than in disease of any other part, but it also takes place in connection with renal calculus. If the hæmaturia appears in connection with symptoms referable to the bladder, the blood probably comes from its lining or the vessels at the neck. If, on the other hand, the hæmaturia occurs in a person who has had renal colic, fixed pain and soreness over the region of the kidney, and especially if before the attack of bleeding he has a spell of pain, the hemorrhage is probably due to renal irritation. There are some differences in the appearance of the blood, as it comes from one or the other of these two localities. If it comes from the bladder, it may be of a darker red than when it comes from the kidney, or it may be greater in quantity, and form clots which will be firm and of a dark color, or the blood may be

mixed with a great deal of vesical mucus. If the blood comes from the kidney, it is usually readily diffused through the urine by agitation; when examined under the microscope, the blood corpuscles are found separate and distinct, and they indicate by their crenated, shriveled look, that they have been lying in the urine for some time. Clots are rare. At times, if the substance of the kidney is involved, there may be a slight hemorrhage from the tubules, which will appear as little tube-casts.

The urine presents other characteristics besides those due to the presence of blood. The urine in renal calculus, if pyelitis has been established, is always albuminous, the amount of albumen being always small and directly proportional to the amount of pus thrown down in the sediment; so that we can, by experience, estimate from the amount of pus in the sediment the amount of albumen in the super-natant liquid. In disease of the bladder, where there may be a great deal of mucus, the urine is not of necessity albuminous; but if the inflammation is severe, with the formation of pus, the urine in cystitis is albuminous, but the amount of albumen is not proportional to the amount of sediment, because there is present a large quantity of mucus, which is not necessarily associated with the presence of albumen. In organic disease of the kidney, the amount of albumen bears a much larger proportion to the amount of sediment than it does in either of the other two affections.

The epithelial cells found in the urine of cystitis and in that of pyelitis differ in character. In the former disease, they are of the squamous variety; in the latter they have more of a spheroidal shape, showing that they come from the higher parts of the urinary passages.

Frequency of micturition is a common symptom in all these affections, that is, cystitis, pyelitis and Bright's disease. This differs so much in different patients that we can not attach to it any material diagnostic value.

Lastly, these patients are anæmic; show the effects of their suffering; have disturbed sleep and usually show loss of flesh.

Having refreshed your memories upon the points to which I alluded on the previous occasion, let me refer to the case which has induced me to again speak of this subject.

This man has, for some time, been under the care of Dr. J. H. Musser, in the dispensary. He is 58 years old, a laborer by occupation. Thirty-four years ago, he had a severe attack of pain over the region of the left kidney, which passed around to the front but not into the testicle; the pain was not at that time accompanied by bleeding. It came on in spells of a few hours' duration for two or three days; he then returned to his work and felt as well as ever. Nine years later, that is twenty-five years ago, he had, after exposure to the weather, an attack of hemorrhage from the penis, which, at that time, was called hemorrhage from the kidney. Of course, after so long a time has elapsed, it is difficult to say whence the blood came. It may have come from the bladder or from the kidney, more probably from the former. Exposure to cold and damp may produce a sudden congestion of the kidney, which will relieve itself by bleeding; there will be hæmaturia for one or two days, and the patient will then recover without any nephritis being established. Far more frequently, however, such attacks of mild, transient bleeding are from the bladder. The frequency with which hæmaturia occurs from the bladder is very great. It is important that we should recollect this, in order that we shall not be unnecessarily alarmed when we meet with such cases. There is a state of hemorrhoids of the bladder (I cannot call it by any other name), a varicose enlargement of the vessels at the neck of the bladder or at the bas-fond. This is strictly analogous to the state of varicose distention of the hemorrhoidal plexus; and, indeed, the vesical plexus is a part of the hemorrhoidal plexus, and subject to the same causes of distention. I have seen, on several occasions, patients, who had their piles ligated, take to bleeding from the bladder. I have had patients who have had hæmaturia for thirty years, and longer, some of them quite frequently, in whom

I could never find any organic disease of the bladder or evidences of calculous disease, and in whom there was a fair maintenance of general health. The bleeding could only be explained by congestion of the vessels at the neck of the bladder. In such persons, exposure to damp and cold will be apt to be followed by hemorrhage. This was probably the case in this man. There was but one attack of bleeding at that time, and it was unaccompanied by pain and swelling over the bladder. This is a pretty strong indication of a predisposition to irritation, congestion and hemorrhage from the urinary tract. He did not have another spell of bleeding until last spring, seven months ago. He has had, for some years, more or less dyspepsia. This very often attends the diathesis, called the uric acid diathesis. It is in such patients that we frequently find associated urinary calculus. Seven months ago, he had a spell of pain, with bleeding. The hemorrhage has occurred four times since then. There is a very slight increase in the frequency of micturition, and he has to empty his bladder once or twice during the night. This is not at all uncommon when a man has reached the age of 65; and even at 58 there may be a little enlargement of the prostate, causing a slight increase in the frequency of urination. Examination of the urine with the microscope shows the presence of pus cells, epithelium from the higher parts of the urinary passages and blood corpuscles, but very little mucus. He states that there has been some small clots passed; these may have come from the bladder or from unusually free bleeding from the ureter.

During the past seven months he has had a number of attacks of pain, which commence over the left kidney, running down towards the bladder, and are attended with increased frequency of micturition. The spells last for a few hours and are sometimes so severe as to cause nausea and vomiting. He has never passed gravel or a stone. When I press in the region of the left kidney, it "stooms," as he describes it. Sudden jars cause pain in this region. When you meet with a case with such a history,

frequent hæmaturia, repeated spells of renal colic, local tenderness, pain and soreness on jarring of the body, and some increase in the frequency of urination, there can be little doubt that you have to do with a case of renal calculus, not merely pyelitis, but also the presence of a calculus. This man probably has a calculus with a uric acid centre and phosphatic concretions in the left kidney, and the pyelitis has been induced by it. The stone being free to move, changes its position at times, causing severe attacks of pain. This case is a fit associate for the milder one which I brought before you some weeks ago. It is an accurate picture of a bad case of calculous pyelitis.

The treatment of these cases is unsatisfactory, tedious and often disappointing. It is not necessary to say that the first thing to be done is to relieve the dyspepsia. It is that which has caused the trouble. The existence of acid dyspepsia, the acid state of the secretions, and the tendency to what is termed the acid diathesis, has led gradually to the formation of minute concretions of uric acid crystals in the calyces or pelvis of the kidney. These have excited irritation, set up inflammation, and thus there has been a precipitation of the salts of the urine, which, mixing with the mucus, have coated the calculus so that it has now grown so large that it cannot escape. Sometimes there is one stone, at other times there are many. They are sometimes found in the tubules, and they may even be found in the body of the kidney. Occasionally they are fastened to the mucous membrane by a mass of lymph. Again, you may find present one or two large movable stones, with prolongations, enabling them to engage in the ureter. All these different conditions are met with. It is impossible, in any given case, to say what is the exact character of the calculus.

As I have said, the first thing to be done is to cure the acid dyspepsia. Note, at the same time, that by curing the acid dyspepsia we render the urine neutral and lessen the irritability of the urinary passages, for acid urine, flowing over these inflamed surfaces, will predispose much more to pain than will

the presence of neutral urine. We must also try to prevent further concretions and relieve the irritability of the urinary passages.

Dietetics, of course, stand first in the treatment of the dyspepsia. Such patients do badly with starch, and with sugar and other sweet articles. They should be put on a carefully selected diet consisting of the whole grains, which contain the gluten, silicates, starch, etc., conjoined, as bread made of whole wheat or bran, cracked wheat and oats; of carefully selected animal food, as meat, eggs and the like, and of green vegetables; acids may be allowed in moderation, as a little vinegar, or the acid fruits and vegetables, as the tomato; but if there is much irritation they had better be omitted. The amount of meat which is to be taken must be determined by the gastric capacity of the individual. We cannot lay down any hard and fast rules in regard to this. Some theories would indicate that this uric acid diathesis was well treated by giving a considerable amount of albuminoid substances and very little starch, but in practice you will find some patients who cannot digest a large amount of meat. In such cases you are obliged to rely greatly upon grains and skim-milk. Nearly always these patients require alkaline salines to be taken in connection with their meals. This is best done by the use of a mild saline (not purgative) water. No water has as high a reputation in the treatment of this disease as Vichy. There are, in this country, a number of springs of this type, but scarcely any of them are so free from irritating properties as Vichy. There is, at Saratoga, a so-called Vichy, which is about as good as any that we have in this country, but is not, I think, quite as well borne by the stomach as the original Vichy. We can substitute, for the alkaline water, the use of liquor potassæ or bicarbonate of sodium.

The use of an alterative diuretic should be associated with the alkaline water. The alterative diuretics which possess the greatest power in controlling irritability of the urinary passages are buchu, uva ursi and triticum, and probably in the order in which

I have mentioned them. A good plan is to order a glass of Vichy water to be taken one hour after each meal and with it a half drachm of the fluid extract of buchu, or one drachm of the fluid extract of uva ursi or triticum. This constitutes an excellent alterative and diuretic treatment for this class of cases; or, we may combine the fluid extract of one of these remedies with liquor potassæ or bicarbonate of potassium, giving, in addition, the compound syrup of sarsaparilla, or syrup of wild cherry bark, or other acceptable flavoring material.

Such patients nearly always require tonic treatment. You will usually find it necessary either to give iron alone, or, perhaps, more frequently, to give iron in combination with arsenic, belladonna and nux vomica. The iron may be given in the form of the pill of the carbonate, the citrate, the lactate, or the potassio-tartrate; thus, we may give a pill containing the following:

℞ Ferri et potassii tartratis, gr. jss,

Acidi arseniosi, gr. $\frac{1}{30}$ ad $\frac{1}{30}$,

Extracti belladonnæ, gr. $\frac{1}{12}$ ad $\frac{1}{8}$,

Extracti nucis vomicæ, gr. $\frac{1}{4}$.

M. et ft. pil. No. i.

Signa: to be taken three times a day after meals.

Counter-irritation in some form is of great service, as is also the protection of the affected zone. A flannel belt, eighteen inches wide, extending from below the crest of the ilium to above the lower border of the ribs, made with plaits and whale-bone, and worn day and night, is exceedingly useful in preventing the congestion of the kidney resulting from exposure.

Decided counter-irritation should be kept up over the spot. For this purpose I prefer the use of the actual cautery. It certainly powerfully modifies morbid action, and thus helps to prevent the attacks of pain; and as the touch of the hot iron is not nearly so painful as a single attack of pain, patients are usually anxious to have the applications repeated. Cantharides should not be used to blister, as it is apt to irritate the morbidly sensi-

tive urinary tract, but if the actual cautery is not employed, antimonial ointment or dilute croton oil may be rubbed over the kidney.

Great care in hygiene is to be observed. Much exertion can not be indulged in without injury; exposure to cold and changes of the weather must be avoided.

In some cases, however, after everything has been done to relieve the patient, he goes on from bad to worse; he becomes more anæmic, the amount of pus increases, and œdema of the legs appears; the urine is more albuminous, showing that there is such a state of mal-nutrition and such a drain on the system as gradually to bring the patient lower and lower. With this, the attacks of pain are, perhaps, more frequent and severe, and on percussion the kidney may be found enlarged. In such a condition the question comes up as to what, if any, treatment can be resorted to in order to afford relief. All the means to which I have alluded have been employed, but something more is required.

We come then to the consideration of operative measures for the relief of this condition. It has been found that operations on the kidney were performed a long time ago, but these were only accidental, that is, a man was cut in the loins and a kidney protruded, and this was removed before it was discovered what it was. In some of these cases the patient has recovered. To Gustav Simon, of Heidelberg, however, undoubtedly belongs the credit of performing the first deliberate nephrotomy. In 1869, he removed a kidney from a woman with urethral fistula, and the patient recovered. Since Simon's operation there have been at least 100 cases of removal of the kidney. These have been collected by my friend, Dr. Robert P. Harris, of this city. His paper will be found in the *American Journal of Medical Sciences* for July, 1882. He publishes the results of 100 cases, a number of these operations (16) were for the removal of painful, wandering kidney. Martin, of Berlin, has operated on eight of these cases. This seems to be a common condition in

Austria, and Dr. Oser, of Vienna, goes so far as to say that one out of every ten women among the poor of Austria who have borne children has a kidney out of place, and that many of them cause much suffering. Other conditions, for which the operation has been performed, are cancer, tubercular disease, calculous pyelitis and calculous nephritis. The general results of these 100 cases may be stated to be that 50 per cent. died and 50 per cent. recovered. In many of the cases the examination of the organ showed that the disease was necessarily and inevitably fatal. It cannot be said that this result is entirely satisfactory. It is clear that we do not yet know the rules for the performance of this operation as well as we could wish. It is a somewhat curious fact that 90 out of these 100 operations were performed out of America, 21 having been performed in London alone. I have long desired that if a patient had a disease requiring this operation, he might come under my care; but during the past ten years I have not had a case where I considered the operation obligatory.

It has been performed both by abdominal section and by lumbar section. I should prefer the latter. The statistics are in favor of this method; in 46 cases, in which the lumbar operation was performed, 23 recovered and 23 died; in 50 cases of the abdominal operation, 27 recovered, 19 died and 4 were still under treatment.

In the case of this patient, none of us would recommend this operation; but in the case of a man with a family of young children, dependent on his labor for a livelihood, who, after being under careful treatment for one or two years showed a continued progress of the disease, and it became evident that his family would be beggared and he himself live in distress, deprived of all comfort by seeing those around him suffer from his condition, I should say that it was right to perform the operation, if he wished it. It is a satisfaction to know that after all attempts have been made and failed, there still remains a resort which, in cases of calculous pyelitis, gives good results in two

out of every three cases; for the cases which brought up the mortality were cases of very serious disease, such as tuberculosis, carcinoma and large cysts. In two out of every three cases of renal calculus operated on, a cure has been effected; and further, we find that so far as we know at present (of course a longer observation may show that this is not so), the health of the patient does not seem to have been impaired by the loss of one of the kidneys.

This man will be placed on the hygienic and therapeutic treatment which I have suggested, and we shall have him report, from time to time, in order that its effect upon the spells of pain may be observed.

A CLINICAL LECTURE ON CANCER OF THE PYLORUS.

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REPORTED BY JOHN H. PRYOR, M. D.,

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GENTLEMEN—The patient before you presents the appearance of one who has long been the victim of chronic disease. He is greatly emaciated, looks wan and feeble, and it is probable that there is considerable disturbance of assimilation. His face wears a weary look, and the lines there, doubtless, have been traced by worry and continuous pain. Although very anæmic, yet a hectic flush is upon his cheek. The eye is sunk and heavy; the mouth has lost its firmness and relaxed into weakness; all expression of hope and determination is gone, and there appears the picture of resignation, calm endurance and indifference. It is the typical countenance of one who has felt torturing pain and struggled through sleepless nights. You cannot fail to notice the marks of advanced life, which indicate that old age has laid her benumbing hand upon this man, to soften his pain by subduing his strength.

Not long ago I described this face to you, and now my words have taken form. Some of you may have noted that his cough,

while I am speaking, is not associated with much effort, seems a matter of slight annoyance, while he expectorates easily. Upon looking at the sputum, I find it to be muco-purulent in character and distinctly the expectoration of chronic bronchitis. Later on, we will listen to his chest for the peculiar sounds which are characteristic of this disease.

We will now hear his history. His voice is feeble; fearing that its tones will not be audible to all, I will repeat the words after him. He is seventy-two years of age; has no hereditary taint; always enjoyed good health until recently. Six weeks ago he first complained of indigestion. At first there was loss of appetite, pain after eating and heart-burn; then later on, he cannot remember the date, he commenced to vomit. About five weeks ago he vomited a considerable quantity of blood, since which time he has retained nothing on the stomach and does not care to eat, because his food gives him pain and is so soon regurgitated. At the commencement of this attack he had diarrhœa, but of late has been obstinately constipated; has shooting, lancinating pains over the epigastrium, and that is all. The history being incomplete, I shall endeavor to draw out a fuller and more exact report by a few direct questions. It is very evident that all of these symptoms point to the food tract, or organs of digestion.

But we will not allow a preconceived notion to so influence our examination as to tinge the diagnosis. If you do not consult this rule, you will find yourself subjecting every answer to the judgment of this premature opinion, thus leading you into an inexcusable blunder. From his replies I learn that the most annoying symptom of indigestion has been and is now acidity, with sour eructations; the vomiting has been persistent and occurs directly after meals; the food is rejected, undigested and unchanged. He does not vomit at other times. The blood which he vomited was fluid and red; the ingestion of food is followed by intense and lasting pain, not localized, but radiating and extending into the hypochondriac region; the pain is con-

stant and is only intensified after eating ; has no fever, nor does he complain of anything else.

We will next turn our attention to the physical signs which may be present : The tongue has a brown fur and is somewhat dry ; placing my finger upon the wrist, I perceive a tortuous, atheromatous artery, with a slow and feeble pulse. Again we are reminded of old age. I promised to verify the diagnosis of chronic bronchitis. With my ear against the chest, I hear sibilant and sonorous rales everywhere, and some subcrepitant rales ; these, combined with the expectoration and age, settle all question in regard to that matter.

An inspection of the abdomen shows little, save flattening of its walls, but feeling carefully, from place to place, I find a resisting, firm tumor at the region of the pyloric orifice, where there should be resiliency. When I percuss over it, a dull sound is emitted, and you know that it is normally tympanitic. Continuing to percuss lightly, I map out a circumscribed area of dullness about as large as a small orange, while he winces and tells me that it is very tender. Normally the pyloric orifice is located at this point, midway between the right nipple and umbilicus, while the cardiac orifice is higher up, at the junction of the sixth costal cartilage with the sternum, a little to the left. It is well to be careful in your statement, when speaking of the position of the stomach, because it is very changeable, and especially so in disease. I have seen the lower edge of the stomach as low as the pubes, again, the upper edge as high as the second rib. In organic disease at the pylorus, the stomach is liable to undergo hypertrophy with dilatation, for the food collecting in the stomach, having no exit, sometimes remains for days, with great distension of this viscus. Not unfrequently disease of the liver and pancreas simulate organic disease at the pylorus. But a study of the symptoms helps one to differentiate. Having carried in mind the history elicited, the diagnosis begins to assume the color of cancer. Let us, then, gather these symp-

toms into a cluster, subject them to an analysis, and see what they tell.

They confine us to chronic catarrh, gastric ulcer, and cancer. Dyspepsia is common to all, perhaps more especially marked in cancer and catarrh. Acidity is generally greater in cancer, while vomiting is a constant symptom. In such a case the food may be retained for a day or two. Often the time of vomiting indicates the seat of disease. If at the cardiac orifice, the food is almost immediately regurgitated. I once saw a case, however, where the œsophagus had become enlarged into a pouch and contained a large quantity of food. If at the pyloric orifice, the rule is variable. Sometimes the food remains for days and is then vomited in large amount. Hemorrhage usually occurs at the commencement and toward the close of the disease. The character of the pain in cancer is somewhat distinctive; it is constant, sharp, cutting and radiating.

In catarrh, vomiting is not so frequent, and the food ejected is frequently mixed with stringy mucus. Again, a watery secretion is often vomited during fasting, especially when complicated by congestion of the liver, kidney or spleen. Hemorrhage is rare. The pain is intermittent, and of a dull, aching kind. The vomiting in ulcer occurs at different times after meals, dependent on the seat of the ulcer. It is not persistent, and is frequently accompanied with slight hæmatemesis. The blood is usually red and liquid, but may resemble coffee grounds. There is localized pain, which is described as sharp, burning and acute. It is greatly increased on entrance of food, and relieved after vomiting. The epigastric region is tender in all, but in ulcer it is often confined to one spot.

I do not think it necessary to continue in this way any further. I have narrated to you the principal symptoms associated with these diseases with a view to their differentiation. If you have followed me closely, and remember the distinctive signs which I have pointed out to you, it must be very plain that this man is suffering from cancer of the stomach. It yet remains, however,

for us to decide upon its seat. As to the variety of cancer we can only conjecture. Statistics prove that cancer affecting this organ is of the scirrhus variety in the large proportion of cases. The location of the disease is surely at the pylorus. The presence of the hard lump in this region, and the fact that the food passes into the stomach, rather preclude consideration of the cardiac orifice. To be sure that fluids pass beyond the cardiac orifice, it is sometimes well to ask the patient to drink, and applying the stethoscope to the epigastric region you can hear the fluid chink into the viscus. The prognosis, as a necessity, must be unfavorable. It is death, usually, at the end of a year. The treatment is only palliative. The existence of pain calls for the free exhibition of anodynes. It is often necessary to add lime water to milk and administer pepsin and bismuth in connection. No matter if they do vomit, some little is always retained. Occasionally you may resort to a trick in dietetics, beautifully described by William Hunter in "Watson's Practice." Feed them a teaspoonful often, and gradually increase the amount from day to day. Of course rectal alimentation is to be considered. During the closing days it often becomes the only source of supplying nutriment. Of late years a new operation (gastrotomy) has come into practice, but it has not justified itself, nor proved that it warrants general adoption. So far the results have not brought benefit sufficiently great to compensate for the suffering and extreme illness consequent upon its performance. Before leaving this subject, I would speak to you of a symptom which may present itself during the last few days of the disease and is apt to be misleading. I refer to the cessation of vomiting and the retention of food. This is due to a degenerative change assisted by ulceration at the pyloric orifice. The cancerous mass breaks down, and a small opening is produced by the ulcerative process which allows a certain amount of food passage into the intestine. I have noticed this condition several times at the autopsy.

BURNS AND THEIR TREATMENT.*

BY CHAS. A. WALL, M. D.

The treatment of burns and scalds is of interest to the general practitioner, both from their frequency and great fatality. Holmes ranks them, beyond all comparison, the most commonly fatal injuries which occur in civil life. In modern times, the large increase in the application of steam to all mechanical industries, and for the purpose of warming public buildings and dwellings, and the necessity thus engendered for intense heating furnaces, has vastly added to the number and severity of burns. Agnew also places kerosene oil among the most common causes, and recommends stringent regulations as to its use. In this country 6000 deaths from burns, yearly, is probably within the limit (there were 4266 deaths in 1860), while in England and Wales alone over 3000 occur in the same period. These facts compel all practicing physicians and surgeons to bestow some attention upon the subject. Burns are common to all periods and conditions of men and have been recognized from the most ancient times, so it is not strange to find that surgical writers of every age have given them considerable space in their treatises, while the mere compilation of the various authors, who have communicated their views to current periodic literature, would occupy more time than I have at my disposal. Notwithstanding this multiplication of authorities, there is, I think, little difference in the generally acknowledged effects, symptoms, prognosis or pathology, and it is only when we come to the treatment that any great diversity of opinion prevails.

Burns and scalds are in their nature the same, and only differ in the mode in which the heat is applied; a burn being caused by dry, a scald by moist heat. In using the term burns, therefore, I am to be understood as including both.

The effects of burns are local and constitutional, and vary according to the depth, extent and part involved, and to the character of the body producing the injury. Thus, an article

* Read before the Buffalo Medical Club, December 13, 1882.

having intense heat, may produce less disorganization of tissue by a momentary contact than one of vastly lower temperature, applied for some time; and a fluid will be apt to attack a greater extent than a solid.

The local effects have been divided by most writers according to the degree of tissue destroyed. Dupuytren made six classes, and these have been adopted by many surgeons (Holmes, Bryant, Ashurst, Velpeau, Erichsen). He includes, under the first, slight burns, causing redness, and followed by desquamation of the cuticle. In the second class, the injury is deeper, causing cutaneous inflammation, with the separation of the epidermis as vesicles of greater or less extent. In the third class, the skin is destroyed to and including the papillæ. In the fourth, the entire thickness of the skin is disorganized. The fifth class embraces those where the subcutaneous tissues and muscles are involved, while in the sixth class the whole thickness of the part is carbonized. This classification is, in some respects, convenient, but the differential diagnoses between severe burns of the third class, and those of the fourth where the skin is destroyed but no deeper parts injured, is almost impossible in many instances. Dupuytren calls attention to the eschar formed, that in the latter it is harder and darker in color, and especially to the fact that, upon pressure, there is less pain where the nerve extremities are killed; but when we consider that a large proportion of burns are in children, little dependence can be placed upon this sign.

These distinctions, as given by Dupuytren, are thought by some authors to be too complex for practice and tending to confuse rather than to assist. Heister, Callisen, Samuel Cooper and Chelius give four classes. Gross recognizes but two, simple and complex. Druitt, Billroth, Stephen Smith, Agnew and Morton all agree in making three classes. This division seems to be the most preferable, and is the one generally followed by the latest writers. The use and necessity of recognizing the relative depth of burns may be best seen in the treatment where, as Holmes says, the

great diversity of remedies recommended is in great part due to the fact that surgeons do not remember that different degrees of burns require different treatment.

The three classes of burns, now usually accepted, are :

First, burns causing redness followed by desquamation of the cuticle. They are of little importance and do not fall under the care of the surgeon unless a considerable extent of surface is involved, in which case they may be serious and endanger life. Burns of equal depth differ from each other in a greater ratio than the extent of the surface affected, and it is well to bear this in mind when judging of the prognosis.

The second comprises those burns which form vesicles, whether they are followed by ulcers or not. The entire thickness of the skin is not destroyed, and if an ulcer forms, it is never deep and granulation soon restores the skin to its normal condition.

The third class includes burns in which an eschar is formed and thrown off by subsequent suppuration. They vary in depth, but all produce death in the tissue destroyed, whether it be the skin alone or extend to the carbonization of the part wounded. These deepest injuries of the third class, which correspond to the sixth class of Dupuytren, are seldom seen and can occur only on the extremities.

While the three classes are usually well marked and may, in some cases, be found on the same person, it is not uncommon for them all to occur in one wound, due to the difference of temperature in the body producing the burn.

The constitutional effects differ according to the depth and extent of the injury, and also to its position. A burn upon the chest, of little depth, may produce more constitutional effects than the entire destruction of a hand or foot. Three well marked stages are found in all serious burns. First, that of depression, which lasts from the reception of the injury until reaction takes place, and is dangerous in extensive burns, even if their depth be inconsiderable. Many die from shock alone, or

from shock combined with pain. Of two hundred fatal cases, from various sources, over one-half died during the first forty-eight hours, some not having reacted at all and others only slightly. This stage lasts about two days, when reaction having been established, the second begins, which may be accompanied by severe fever and delirium. Here we must watch for internal congestion, inflammation of the brain, lungs, or alimentary canal. The local influence of the injury is marked, a burn of the abdomen being often followed by peritonitis or enteritis, while inflammation of the bronchi, lungs or pleuræ follows a wound on the chest. It is not so well marked in burns of the head. Curling, in 1842, called attention to the fact that ulceration of the duodenum is often met with in children. This is a grave complication, and proves fatal, either from hemorrhage or perforation and peritonitis. He thought it was due to the vicarious action of Brunner's glands. Feltz, however, considered it to be caused by capillary embolism. It probably arises from congestion, as do the other internal complications (Holmes, Agnew); but why other portions of the intestines are not equally liable is unknown.

In about two weeks the eschars separate, when the third, or stage of exhaustion sets in. The patient now suffers from extensive ulceration, and may sink under it and die from the profuse suppuration. Septicæmia and visceral degeneration may bring about a fatal result in other cases.

The local signs of burns are well known. They are the physical result of heat applied to organized tissue, and vary from the faintest browning to the black carbonization of tissue. The local symptoms are those of inflammation, the same as from any other cause, and are proportionate to the depth and extent of the injury. Ulcerization, granulation and cicatrization do not differ from that seen in the general repair of the continuity of the skin.

The constitutional symptoms are those of shock, pain, and coldness of the surface and extremities. This may be transient in small burns, but in the more serious it is well marked.

We will then find the patient shivering, the surface pale and cold, the pulse quick and feeble, and the depression, in some cases, amounting to total collapse, from which they never react and die in a few hours. After reaction comes on, there will follow fever, with symptoms of internal congestion and inflammation when complications occur. If the fever is high or continued, albumen will usually be found in the urine. Pain often continues unabated. During the third stage the symptoms are those of exhaustion and debility, while little pain is felt except when dressing the wounds.

The pathology of burns is that of congestion and visceral engorgement, as has been shown by Holmes and Erichsen. How much this may be owing to change in the blood corpuscles is under dispute. The later manifestations are those which naturally result from this condition.

If a burn be of great extent, involving a large proportion of the body, the danger to life is extreme. Practical observations have fixed as an axiom that when more than one-half the body is injured, death will result. A majority of the deaths take place during the first stage, without complete reaction having been brought about. Scalds in children are often rendered dangerous by the inhalation of steam causing acute inflammation of the air passages, with death from œdema and spasm of the glottis. It is commonly accepted among the laity that in conflagrations death follows from inhaling flame. It is hardly necessary to say that it is due to smoke and foul or noxious air. During the second stage death occurs from any of the internal complications mentioned, while later the danger arises from exhaustion, debility, septicæmia, and visceral degeneration.

The constitutional treatment of burns is, during the first stage, directed to the depression and pain. Reaction must be brought about, and this is best done by administering a full dose of opium, combined with brandy, to be repeated, if necessary, in an hour or two. According to Dr. John Morris, alcoholic drinks are not advisable. The best stimulant is strong,

hot coffee, to which a little brandy may be added, if manifestly needed. The dose of the anodyne must be double the ordinary one, and proportionate to the age and condition of the patient (Gross). Chloroform, while dressing the burns, may be indicated in some cases. Warmth to the surface is soothing and assists in promoting reaction. If any part is absolutely destroyed, it can be removed at once, but nothing should be lost by too early interference. Bryant relates a case where a man stepped into molten lead, and his foot, when withdrawn, was encased in a boot of metal and the tissues destroyed to the bone. The foot was amputated above the ankle without disturbing the metal. Injuries of this nature can only be seen upon the extremities, and it is usually best, except in extreme cases, to be a little conservative. In injuries in which a large surface is denuded of cuticle, the exudation may be so great as to endanger life and require surgical interference and the removal of an arm or leg involved. In the second stage thirst must be quenched with ice, as the vomiting induced by flooding the stomach with fluid is an additional danger. Constipation is to be relieved by a simple saline or mild laxative. Opium must be continued where there is pain or irritability. After suppuration begins, stimulating and sustaining food must be given in quantity. In some cases the amount required is astonishingly large. Tonics may also be used with great benefit, especially combinations of bark and iron. Internal complications must be met as they arise.

The local treatment of burns is the most diversified of all surgical injuries. Nearly every author, and, indeed, almost every practitioner has his own peculiar method, which he recommends as beyond comparison the best to be employed. Holmes, in his excellent monograph, says: "The local treatment of burns is a subject on which many books have been written, and perhaps more numerous remedies recommended than in any other branch of surgery." It would be interesting

to study the treatment of burns in the earlier periods,* but it is beyond the limits of this paper to give even a classified table of the remedies advised, and it will be necessary to confine ourselves to a general view of some of the most important methods in use at the present time.

Holmes excludes the air from the burn by some local application, such as flour, starch, carron oil, or cotton wool, where the injury is slight, but when the skin is destroyed, considers nothing better than oil of turpentine. He gives as a good stimulating salve for deeper burns,

℞ Unguenti elemi, ℥j,
 Unguenti lambuei, ℥ij,
 Copaibæ, ℥iij.

M.

and applies, when the discharge is great,

℞ Acidi carbol., ℥j,
 Olei olivæ, ℥iij.

M.

removing all sloughs when they separate. Burns should not be dressed too frequently, but care should be taken to guard against accumulation of pus and fœtor. When blisters rise, he opens them at once and allows the fluid to escape, but preserves the skin, as it forms a protection for the part. This is the almost universal practice, and authors lay the greatest stress upon it, and recommend that any clothing, immediately covering the part, be cut off in removing to escape the danger of rupturing the blister. These may, in some instances, be of great extent, a complete cast of the hand and arm having been thrown off in one case. James Syme, however, opposes retaining the epidermis, when separated. He says: "When blisters rise, the detached cuticle should be not only laid freely open, but taken away altogether, as its pressure seems to increase the irritation."

*Hippocrates recommended, lard and oils or their combination with astringents. So late a writer as Dr. Packard places the utmost confidence in the use of *fresh lard*, no great departure from the earliest treatment.

I have seen one case in which this procedure seemed to give a good result. Willie O. was burnt on the face and extremities, and, by violently claspings his hand to his face, ruptured the blisters. I carefully removed the shreds from his forehead, nose, cheeks and chin, and applied a solution of bicarbonate of soda, but was obliged, later, to change to carron oil, from the impossibility of retaining the former in place. The injury to his face healed quickly, and the ulcers, although deep in places, closed without leaving any cicatrix. On the extremities the burns were of a less degree and the cuticle was not removed, but punctured, still the cure was delayed for some time after that upon the face.

Syme declares that carron oil is now entirely superceded, and says: "If the part retains its vitality, cold and cotton will prove most useful, and if the texture of the part be destroyed, nothing is better than a poultice until the sloughs separate, and then the treatment is the same for both." And again: "Cold applications afford most relief, and sometimes, if at once employed, prevent inflammation." John Earle treated burns with ice and saw no bad results following. He, however, limited its use to cases having no contra-indication, such as depression or internal congestion.

The plan introduced by E. Kentish early in the present century is, first to wash the part in oil of turpentine and then dress it with resin ointment, thinned with turpentine.

R̄ Ung. resinæ, ℥j,
Olei terebinth. ℥ss.

M.

Applied on lint.

Druitt favors carron oil, water dressings, or poppy solution, and when ulcers occur, uses chalk ointment or zinc lotion. In large injuries, where there is no tendency to heal, he covers the ulcer with bismuth and makes pressure with sheet lead, held down by adhesive plaster.

Thomas Bryant applies to burns of small extent carbolic oil, as :

R̄ Carbolic acid, ℥j,
Olive or linseed oil, Oj.

M.

or ointment,

R̄ Carbolic acid, ℥iv,
Lard, ℥iv,
Castor oil, ℥j.

M.

When larger surfaces are involved, these should be replaced by carron oil or co. tinct. iodine ℥j to water Oj. He thinks that when the ulcer is large, too much patience can not be exercised in attempting skin grafting, and any surgeon who does not thoroughly try it, is negligent of his duty.

Cold applications, according to Prof. Gross, should not be resorted to without great care, from fear of internal congestion and effusion and that they are chiefly adapted to the young and strong during summer, and even then there is danger. He thinks any of the domestic remedies are good, but has long exclusively used carbonate of lead in the form of white lead of the consistency of cream. He has never seen any manifestations of lead poisoning following its exhibition. He considers carron oil so exceedingly filthy and disgusting that it should be discarded from private practice.

Dr. Morris condemns carron oil as useless. He recommends

R̄ Acidi carbolici, f℥j-iv,
Morph. sulph., gr. ij,
Olei olivæ, f℥vj.

M.

a suitable application for most burns. In bad scalds of children as he places them in a bed of bran. This has the advantage of absorbing all exudation and need not be changed for some time.

Erichsen protects the part with any of the usual remedies and has found carron oil to agree best in some cases. He considers it of the greatest importance that the dressing be changed as seldom as possible.

Samuel Cooper called lime water and oil inert, and strongly recommended the Kentish plan. To repress the growth of exuberant granulations and absorb secretion he employed powdered chalk.

R. Liston applied cold to trifling burns, and to more serious ones, watery acids or alkalies, either hot or cold, and found good results from each, as he also did from flour, tar and pitch.

Prof. Billroth recommends, when all three degrees of burns are combined, nitrate of silver gr. x to aquæ ℥j to be painted over the parts, and compresses wet with it to be constantly applied until the eschar separates. The pain from this cauterization is sometimes very severe, but a crust soon forms and the pain then ceases entirely. In burns of the first and second class the treatment looks more towards alleviation of pain than to any other end. Remedies are used which cover the skin and protect it from the air. He does not like collodion from its tendency to crack, and at these points the skin will become sore. Velpeau found that pressure by adhesive straps will promote cicatrization.

Dr. Marsh uses a saturated solution of alum, ℥j to water ℥viij, applied on cloths to recent burns.

Dr. Ely McClelland, U. S. A., says that a solution of bicarbonate of soda instantly relieves pain and prevents cicatricial deformity. He uses a saturated solution, one-half pound to a quart of water, applied on patent lint. The dressing should not be disturbed for several days, and must never be allowed to become dry.

Dr. A. H. Buckmeister gives as an improvement on the last : "To equal parts of linseed oil and water to which lime has been added (making it about three times the strength of aquæ calcis) there is placed enough sodium bicarbonate to make a thick paste (in severe cases morphia may be added); this mass is applied with loose roller bandages in the usual way. This dressing has all the advantages of the sodium bicarbonate alone and does not adhere to the skin."

The following has been going the rounds of the journals for the last few months: "Saturate a soft piece of fabric with alcohol, lay it over the burn, then cover it with cotton or finely picked oakum. This is the most cleanly dressing that can be adopted. It may be thought that alcohol, applied to a burn, will produce more pain; but try it and you will be agreeably surprised to observe how quickly it will allay the pain. Subsequently, disturb the dressing as little as possible; wet the dressing with alcohol, and the result you will find better than by any other method."

J. B. C. Guzzo has found glycerine most valuable in preventing scars. He uses it diluted with an equal quantity of water, or pure, according to the nature of the burn, and applies it on linen compresses. He also uses a combination of one part of glycerine with three parts of collodion, applied with a small hair brush. The results of the employment of glycerine in this manner have convinced him that it has some specific action in expediting the cicatrization of burns, however extensive they may be.

Ashurst does not believe that, with regard to local applications, it makes a great deal of difference what article is used, provided the surface is thoroughly excluded from the air. More important than the particular article used is the mode of using it. Only a small portion of the surface should be uncovered at once, and the burn, if extensive, should thus be dressed, as it were, in detachments. When the sloughs have separated, the remaining ulcer may be dressed with lime water, dilute alcohol, or zinc or resin ointment, as in the case of any other granulating surface. Care must be taken to guard against undue contraction of cicatrix by the use of appropriate splints and bandages.

W. R. E. Smith cleanses the parts after suppuration has begun, then washes with carbolated oil and dusts from a flouredredger,

℞ Zinci oxidi,
Magnesiæ carbonatis, aa, ℥j,
Pulveris amyli, ℥ij.

M.

This forms a firm incrustation like a scab, under the protection of which the parts heal rapidly. It should be applied whenever the moisture appears.

Dr. Binkerd gives, as a soothing anæsthetic ointment,

℞ Pulvis iodoformis, ℥ij-iv,
Cerati, ℥j.

M.

Five or six drops of carbolic acid may be added.

Prof. J. Lister recommends, as a dressing for burns,

℞ Carbolic acid, ℥iv,
Olive oil, ℥iv,
Castor oil, ℥j.

M.

In extensive injuries, Hebra has found great benefit in the continued use of the water bath. It may, under proper circumstances, be continued for a week or more. Dr. Duga states that Labarraque's solution will immediately relieve pain and prevent suppuration when the whole thickness of the skin has not been destroyed.

Stephen Smith employs, in burns of the first class, cold water, lead water, scraped potatoes, flour, etc. In those of the second class he uses carron oil, carbolized oil, white lead or zinc ointment. While in burns of the third class he first dresses them to relieve pain and then afterwards so dresses them as to promote the separation of sloughs.

Dr. Agnew would treat burns of the first class with cold water, unless their extent was so great as to render its employment dangerous. In the larger burns he protects the skin with any of the common remedies. To those of the second class he applies benzoated zinc ointment and envelops the whole in cotton-batting. In burns of the third class, after a few days, he uses a lotion of lead water and laudanum to separate the sloughs, or for this may be substituted flaxseed poultices, changed every six or eight hours. As soon as suppuration is well established, the parts should be thoroughly cleaned with deodorizing washes, and the poultices rendered stimulating by sprinkling over them

a quantity of the compound resin or Kentish ointment. After granulation begins, special attention must be given to the ulcer to prevent contraction. No medication will entirely prevent it, he thinks, but a solution of caustic potash, gr. iij to water ℥j, applied lightly over the granulations every day or two during the process of healing, lessens this tendency, to some degree.

The above citations might be multiplied without limit, but enough have been presented to show the general principles which underlie the various methods of treatment. From them we conclude: that all burns require to be protected from the air; that inflammation must be combatted, and any foreign body removed before granulation can begin. Applying these facts, we find that the first class being superficial and the inflammation unimportant, any substance that protects the skin will be sufficient. As dry materials cause less inconvenience than moist, they are usually preferred. In the second class the injury is more severe. Congestion and pain are prominent. Capillaries are engorged and nerve extremities exposed. The indications are to relieve the pain and lessen the inflammation. This is best done by local anodynes and moisture. We find in lotions, oils and ointments the best applications to both protect the parts and relax the irritated tissues, and add to them any remedy which will exert a local anodyne effect upon the sensitive nerves.

In burns of the third class the disorganized tissue acts as a foreign body and must be removed. This is performed by the use of poultices which soften the eschar and stimulate the surface of the wound to a healthy action. Any substance which will macerate the destroyed part and incite the depressed function, is applicable. Oils have been most often used, but a poultice will answer by adding to it the stimulating property, if that be wanting.

The value of any dressing for general use in all burns will be in proportion to the degree in which it protects the skin, relieves pain and relaxes the inflamed tissues; and while they may all do this to a greater or less extent, it is better for us to meet the indications as they may present, and not be too much attached to a particular remedy.

Clinical Reports.

AN INTERESTING QUESTION IN AUSCULTATION.

BY P. W. VAN PEYMA, M. D.

Mr. B., a blacksmith, in the neighborhood of 36 years of age, has for a period of considerably over a year been a consumptive. The disease is, at present, nearly limited to the left lung. The upper portion of the right lung is, however, not quite free from tubercular trouble. A considerable cavity has formed in the left lung anteriorly. Upon examination by auscultation, a few days since, a distinct tinkling sound was heard in the neighborhood of the left nipple, synchronous and additional to the normal cardiac murmurs. This tinkling was more readily heard by direct auscultation, but was also transmitted through Cammans' stethoscope, being readily heard by the patient himself. The sound was, in my opinion, due to the impulse of the heart upon the walls of the cavity. While I have not given the subject any special research, I do not remember having seen it noticed in medical literature.

Editorial Correspondence.

PHILADELPHIA, December 16, 1882.

DEAR JOURNAL—In addition to the hospitals mentioned in the last letter, there are several which are well worthy of a visit. Pre-eminent among them is the old "Pennsylvania," a mention of which will revive the thoughts of youth in many an old veteran in our ranks who walked its wards in his college days. Established one hundred and thirty-four years ago, it has, from its earliest days, freely opened its doors to the student; a wise management recognizing that in connection with the proper treatment of the sick in a hospital, one of the most beneficent uses of such an institution is the aid which it can and ought to give in propagating a wise system of medical educa-

tion. The hospital, though in the centre of the business part of the city, is located in the middle of a large square, surrounded by a noble girdle of trees and open to the light and air on every side. Knowing that the main building had been erected more than a century ago, I was surprised to find its wards so admirably constructed and ventilated. The present system of ventilation is of recent adoption, but I was informed that the principal wards remain as originally constructed. A feature of the hospital is a very excellent medical library, which, for many years, was the largest and best in Philadelphia; now, however, that of the College of Physicians and Surgeons is the great library of the city. Connected with the hospital by a corridor is an octagonal building, of brick, capable of comfortably accommodating five hundred students. Clinics are held here every Wednesday and Saturday, from 10 to 12 A. M.; while at Jefferson Hospital, which is but a few blocks away, the clinics are from 12.30 to 2 P. M. The same arrangement exists at the "Philadelphia" and "University" Hospitals, so that on every clinic day one is free to choose between the four great hospitals, attending any two of them as the reputation of the clinician may attract.

Another great hospital, well worthy of a visit, though too far away from the colleges to be utilized for clinical instruction, is the "Episcopal" Hospital. Situated near the railroads and large manufacturing concerns, it is especially rich in surgical cases. The buildings, erected at a cost of about \$350,000, consist of a central building, to which a fine chapel is connected, and two large wings. The wards are most bright and cheerful, particularly the children's ward, the walls of which are polychromed and handsomely illuminated with simple hymns and verses easily within a child's comprehension. As we entered the ward, a pretty picture presented itself of a charming young lady visitor, seated between two beds, in which lay two little children, whose wan faces showed a sad experience of suffering, but now lit up with interest and pleasure, while around the foot of the bed had gathered a little audience, some with crutches,

one in a rolling chair, but all absorbed in some simple story which the young girl was reading to them. If any of my readers are familiar with the pitiable spectacles presented in the children's wards, at the old "Philadelphia Hospital," the rounds of which I had been in the habit of making, they will not wonder that I was struck with the contrast. The ventilation of the entire building is admirable, and, indeed, in all its appointments it appears to be a model hospital. I was particularly surprised by the statement of Dr. Knight, the superintendent, that they had not a single paying patient, the hospital being supported entirely by the voluntary offerings of the churchmen of the diocese, although the annual cost of its maintenance approximates \$50,000. Notwithstanding its objectionable name, its catholicity is manifested by an inscription on its wall which testifies that it is open to all sufferers without distinction as to creed, color or nationality.

To-day, at the "Pennsylvania," R. J. Levis showed the successful result of plastic operations on a man whose face, neck and breast had been severely burned, resulting in such cicatricial contraction as to prevent the elevation of the chin from the breast; his face, also, had been terribly disfigured. These deformities had been pretty well relieved by several operations, but there remained marked ectropion of the lower lids. As the face was covered with cicatricial tissues, an attempt was made to supply the integument necessary, by the insertion of a piece of skin from a rabbit. Levis is a brilliant operator and a good lecturer. Among the surgeons in active practice here, though, there is no one, I think, who competes with Agnew for the first place. His clinics are always largely attended, and it is a pleasure to see him operate; there is no display, no haste, yet his work is done with rapidity and effectiveness. His lectures are delivered in the same quiet way. I have attended a few of them; but as a lecturer he is not, I think, the equal of Moore, of the Buffalo College; the students, however, consider him an admirable teacher, and they are good judges.

I have no hesitation in speaking of Pepper as the best clinical lecturer I have ever heard. I am glad to be able to send you a report of one of his lectures, taken verbatim by an accomplished stenographer. Very few teachers, indeed, have such a command of language as to be able to endure an exact reproduction of their words in cold print.

All of the professors here deliver their lectures without notes; in some departments not an easy thing to do, but certainly the most effective way in teaching. There is, indeed, a spirit of youth and progress in everything about the old university, due, I believe, to the number of comparatively young men in its corps of teachers. Pepper, Goodell, H. C. Wood, Tyson, Duhring, are all men well under 50, and connected with the university as demonstrators, lecturers, etc., are a great number of younger men, some of whom already press the professors pretty closely as to their local reputation for ability.

The pathological laboratory is presided over by Dr. Formad. Most of the readers of the JOURNAL are familiar with his name through the admirable researches on the micrococci of diphtheria, accomplished conjointly with H. C. Wood, and published by the National Board of Health. His recent article read before the Philadelphia County Medical Society, in refutation of Koch's theory as to the etiology of tuberculosis, has also deservedly attracted a good deal of attention. In that paper he claims to have positively proved that true tuberculosis can be produced without the agency of the bacilli tuberculosis. He does not deny their presence, but asserts that they are secondary, the tubercular tissue serving merely as a nidus for their growth. Ergo phthisis is not a specific infectious disease, but may occur in man or animals having a scrofulous diathesis. Such animals will become tubercular from any injury resulting in inflammation or from repeated injuries. That scrofulosis, and subsequently tuberculosis, can be induced artificially in animals normally not possessed of this condition, e. g., non-scrofulous animals, the cat, for instance, by being kept in confinement and poorly nour-

ished acquire a scrofulous anatomy and will then succumb to tuberculosis if any inflammatory process is set up. No specific action of bacilli is required. The inoculation of perfectly innocuous foreign materials, such as sand, or pieces of glass, or metal accomplishing the result.

I asked Formad if his present position did not militate somewhat against the result of his researches as to a specific micrococcus in diphtheria. The candor of his reply was refreshing: "What if it does? I have often been mistaken; I have to tell the truth as I find it; if I don't, somebody else will." The question is one of the greatest importance, and if he can, in this case, maintain his position, it will reflect no little honor on American pathologists, and will be another notable example of the scientific progress of this country. We have, perhaps, all been accustomed to depreciate the value of work accomplished in our own laboratories in comparison with European pathological researches, but in this, as already in other departments of medicine, we must eventually come to the fore.

H. C. Wood, whose opinion upon such a subject is of the highest value, considers Koch's theories as highly improbable and *opposed* by the well-known *clinical* facts of the disease, while another authority asserts that a contagious materies morbi is in a high degree probable, because *confirmed* by *clinical* experience as well as experimental study. With these two directly contrary expressions of opinion I will drop the subject, convinced that those of us who have accepted Koch's theory, are not going to give up our bacilli without more evidence than we yet have, that they are not the little demons we suspect them to be.

I had the pleasure of hearing the first lecture, of a course of three, to be delivered by Dr. Austin Flint, under the auspices of the Philadelphia County Medical Society. His subject was "The Physical Exploration of the Lungs by Means of Auscultation and Percussion." Much curiosity was manifested before the first lecture as to what the distinguished clinician could possibly

say on this subject, which was not already well known. The hall, on the evening appointed, was filled to overflowing, indeed many could not obtain admittance. This lecture was limited to a consideration of "the true mode of study and its requirements as regards auscultation and percussion, and the signs obtained by percussion." Although the lecturer presented no ideas other than those already universally accepted and so well taught in his "Manual of Percussion," etc., still it came with such a freshness and vigor from the lips of the distinguished author that it was listened to with apparent interest and pleasure by his audience, though many of them were themselves teachers of no mean rank. One novelty, however, he did give us, and that was the employment of loaves of brown bread to demonstrate the signs obtained by percussion.

Certainly the sounds obtained by percussion with a hammer or a loaf of bread enveloped in a towel are strikingly like the normal pulmonary resonance. Absence of resonance, or flatness, was illustrated by percussing on a loaf of bread, one-half of which had been dipped in a solution of gelatin. The "flatness" produced by the filling up of the vesicles of the bread on one side was in marked contrast with the normal resonance on the other. Diminished resonance, or dullness, was produced by introducing some sticks of candy into the bread. Tympanitic and amphoric resonance was closely simulated by forming cavities in the loaf under various conditions. Flint still commends the hammer and pleximeter which here is rarely used.

I cannot take my leave of Philadelphia without referring to the hospitality and cordiality with which the medical stranger is received by the profession here. There is no end of doctors; they are decidedly more numerous than in Buffalo; but, so far as my limited acquaintance went, they are not only well educated and hard workers, but a more genial and pleasant body of men, as met professionally at the associations, or hospitals, or in society, it would be hard to find.

A. R. D.

Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Regular Meeting, December 4th, 1882.

Vice-President, Dr. John Cronyn, in the Chair. Dr. C. M. Daniels, Secretary.

Present—Drs. Bartlett, Phelps, Granger, Fowler, Tremaine, Brecht, Gay, Coakley, Hartwig, Briggs, Stockton, Wm. Ring, C. A. Ring, Macniel, McBeth, Hopkins, Johnson, and, by invitation, Drs. Clark, Waldurff, Hubbell, Frank, Ingraham, Peterson, Frederick and Long.

Applications for membership were received from Drs. Edward Clark and E. C. Waldurff.

Dr. Tremaine introduced the subject, "Strictures of the Urethra," and, in discussing it, spoke of their frequency, given by statistics as being 2600 in 150,000 cases of specific urethral diseases. Experience had taught him that there was even a greater proportion where large garrisons were located, gleet being something that was exceedingly familiar, and that there were various opinions regarding it. Anatomically speaking, the organ was of a complex nature, and there was a laxity regarding the cause or nature of strictures. The urethra, instead of being a tube and merely mechanical in character, is really a valve, being an outlet for semen, and, secondarily, for the urine. Also, the intimate connection between the urethra and the corpus spongiosum, together with the free intermingling of nerve fibres, made inflammatory action different in its result from that at other points. Stricture is never found in the prostatic portion, because the quantity of connective tissue is small, this portion of the urethra being of a musculo-glandular character.

The cause of stricture, nine times out of ten, is from urethritis, the product of inflammatory action, being a proliferation of connective tissue and neoplasm, destroying the dilatibility of the canal, which gradually contracts, obstructing the flow of urine, and most frequently results in cystitis, to a greater or

lesser degree. The tendency of the newly-formed connective tissue is to undergo a cartilaginous formation, and which is extremely slow in being absorbed. Many nervous symptoms are, at times, observed, as is great muscular debility, analogous to that in the female where cervicitis is present. Spasmodic stricture of the deeper portion of the urethra is referred to by Dr. Otis as being common and caused by reflex irritation only. The speaker considered this an extreme view, although agreeing that it was not unfrequently the case, and that such were sometimes mistaken for organic stricture.

The treatment varies according to location, the first effort being to try and pass the sound, bougie or whalebone probe, and over the whalebone probe, if used, a tunnel sound. If unable to do this, external urethrotomy is a last expedient. As to the advisability of cutting by internal urethrotomy, as advised by Dr. Otis, the speaker, from personal experience, had found it unsatisfactory in the deeper portions of the canal, although usually advisable when the stricture was within two inches of the meatus, eminent andrologists considering that in all other cases gradual dilatation is safest and best. As to the use of sounds, he thought that in general they were introduced too frequently, and that once in five to eight days was sufficient, giving time for the irritation to subside during the interval. Recommended the gum elastic bougie in diagnosing in preference to the bulbous metallic mass of Otis, which he thought might do harm. Advised over-distension where the calibre would admit, and recommended Gouley's instrument. As to the word *cure*, he thought it could not be applied to strictures, although practically such would sometimes seem to be the result and answer all purposes when the gleet disappeared and the obstruction was apparently removed. Regarding dilating bougies, up to No. 9 of the English scale the soft gum elastic are preferable, afterward the polished conical steel sounds, which seem to give even less pain. Said that some authorities say, "forget your anatomy when dealing with urethral strictures," but which to him would seem poor practice.

As to "electrolysis" he had no personal experience, although it had been highly recommended. Again, referring to the practice of cutting, he thought it was going out of fashion. Mentioned Dr. Eldredge, of Japan, who at one time endorsed but had now discontinued it, as had many others. Referred to the enlarged prostate as another form of obstruction, but without a discharge, and related Gouley's method for the removal of a part of the so-called "third lobe" with an instrument resembling the lithotrite, but with shorter jaw, which cut off the obstruction. It was rarely performed, and there is considerable controversy in England regarding it.

Discussion—Dr. Gay said he was exceedingly interested in the address of Dr. Tremaine, and thought that a few more papers of like ability would restore our association to its former prestige, when its papers were quoted and referred to all over the land. He had no criticisms to offer, and considered the teachings of Dr. Tremaine as sound, and especially regarding the urethra as a *valve* and an outlet, not an inlet. Pathologically, he had nothing to add. Considered the filiform bougie a great advance in urethral exploration, and if not irrelevant, he believed that a greater advance was in the demonstration of Dr. Otis, "that of the urethral calibre in relation to the flaccid penis." He thought that, possibly, older surgeons had not adopted the Otis idea; but, believing "a stricture once a stricture always," the speaker himself was one of that kind. He had treated many cases of stricture, and performed all operations for the same, and between division, dilatation, internal and external urethrotomy, agreed that we do as little cutting as possible. Sir Henry Thompson proposed that if No. 1 up to No. 6 be introduced, it then be divided; but, in opposition, Dr. Gay believed that if No. 6 could be used, we could gradually and certainly advance to No. 24.

Dr. Bartlett had not had extensive experience in the treatment of strictures, and asked to be informed as to the opinion of others in regard to the use of caustics, also regarding the length of time it was best to leave in the sound at each dilatation. His

treatment of enlarged prostate had been quite successful where a soft catheter was left from twenty-four to forty-eight hours, which gave the needed relief, subsequent introduction being usually unnecessary. Thought that the ideas regarding internal urethrotomy were becoming more modified.

Dr. Phelps had been obliged to have considerable to do with strictures, especially in hospital practice, where the cases were usually extreme ones, and where previous unsuccessful attempts had been made to pass the catheter before the patient reached the hospital, which many times left the urethra in a very irritable condition, the passage being filled with blood clots, etc. Many times, when a case was urgent, had aspirated bladder by suprapubic puncture, and had never had any unfavorable results. Had found the filiform bougie invaluable, and explained his manner of introduction, saying that when one failed to pass it was left in situ, then another used, until the several false passages were filled, and, by persistent effort, he was always successful in reaching the bladder. Had used Gouley's divulsor, and recommended its use in the pendulous urethra; also, thought that slitting the meatus was often necessary for the introduction of a proper size sound.

Dr. Hartwig asked Dr. Tremaine to explain in what way his operations, as advised by Dr. Otis, had been unsatisfactory. He also strongly expressed his doubts as to Dr. Tremaine's statement regarding the catarrhal inflammation of the bladder following stricture, which he thought did not occur, and related cases where urine was retained for several weeks without such results. Said that Dr. Haney, of Germany, recommended that when the prostate was enlarged, it be injected through the rectum. The speaker had tried it, but with disastrous results.

Dr. Cronyn was sorry that the time given to discuss the subject was so short, and thought it might be well to continue it at a future meeting, as it was certainly one of great importance. He thought where any instrument, however small, could be passed into the bladder, the word "stricture" did not apply; for, as Syme says, "no stricture is impassable that anything can

be passed through." He had not adopted the whalebone bougie, not yet having found it necessary. Thought that the failure in passing a catheter was sometimes due, especially in young practitioners, to a lack of knowledge as to the anatomy of the parts. If an anæsthetic was necessary, advised using as large a catheter or sound as possible, it being less dangerous. Spoke of the various instruments, as one invented by Wakely, of London; also, that of Sir Henry Thompson, which is very heavy and easily passes the ordinary stricture, and which is highly praised by many, especially Hutchinson, of Brooklyn. The speaker had used it often, and for all passable strictures it was the most ready and satisfactory. Thought that stricture in the prostatic portion of the urethra only occurred after an abscess or similar cause. Referring to the many instruments invented, and so highly lauded by their inventors, he said that doubtless each could use his own best, and that, in general, in the hands of others they were far less satisfactory. He considered the best and surest operation for organic stricture is external perinæal urethrotomy; cutting on the inside he opposed, as more accidents are liable to follow, such as urethral fever, pyæmia, etc. Related some personal experiences which confirmed his views. The question of caustics was, to his mind, now out of date.

Dr. Tremaine, in conclusion, referred to the urethral irritation that sometimes occurs, followed by a constant discharge, and independent of any specific cause, which gives rise to no little alarm, but which, however, is non-infecting, and can usually be successfully treated by irrigating the urethra daily, using a return current catheter and a solution of borax, glycerine and water; although he has, in extreme cases, found it necessary to use a solution of nitrate of silver, five grains to the ounce of water. Regarding Dr. Phelps' procedure in tapping the bladder by supra-pubic puncture, he would not advise it unless immediate relief was absolutely necessary and other measures not at hand. In due deference to Dr. Hartwig, he felt bound to affirm that prolonged stricture *always* produced cystitis. Also, in reply, regarding the result of some of his operations by Otis' method,

they were nearly all negative, and of eight cases no material benefit was obtained. Thought that the operation of external urethrotomy was a delicate one, even under favorable circumstances, and especially if attempted without a guide. Various instruments were exhibited.

Dr. Cronyn, in explaining the evident difference of opinion between Drs. Tremaine and Hartwig regarding cystitis, said that in the cases related by Dr. Hartwig there was no evidence of purulent contamination of the urine in the bladder, as would be the case in stricture from some specific cause; and that it was well known that urine, of itself, in the bladder, would not cause cystitis.

Adjourned.

CLAYTON M. DANIELS, *Secretary*.

THE BUFFALO MEDICAL LIBRARY ASSOCIATION.

First Meeting, December 15th, 1882.

Present—Drs. Burwell, Hauenstein, Mann, Granger, Lothrop, W. W. Potter, Gay, Frederick, Brecht, Abbott, Hopkins, William Ring, Howe, Cary and Briggs.

On motion, Dr. George N. Burwell was elected Chairman and Dr. A. H. Briggs, Secretary.

Articles of incorporation, in accordance with the law of the State of New York, were adopted, and signed as incorporators by all present, and their signatures acknowledged before a Notary Public.

The following officers of the Association were then elected by ballot: President, George M. Burwell, M. D.; Vice-President, John Hauenstein, M. D.; Secretary, Albert H. Briggs, M. D.; Treasurer, C. C. Frederick, M. D.; Librarian, M. D. Mann, M. D.; Trustees, Drs. W. D. Granger, Henry R. Hopkins, Lucien Howe and Thomas Lothrop.

The following physicians were then elected incorporate members of the Association: Drs. Cary, Tremaine, Mackay, Hauenstein, Stockton, Granger, Packwood, O'Brien, Keene, Brown, Armstrong, Pryor, Hartwig, Hebenstreit, Grove, Johnson, Hop-

kins, Briggs, Lothrop, Burwell, Brecht, Potter, Abbott, Howe, Mynter, Slacer, Peterson, Long, Andrews, Cronyn, Rochester, Gay, Daggett, Mann, Fowler, Frederick, Samo, Pettitt, Chas. Ring, Putnam, Diehl, Daniels, Jewett, Folwell, Van Peyma, Bartow, Wyckoff, Miner, Tobie, Mixer and Davidson.

A constitution for the government of the Association was then adopted.

Adjourned.

A. H. BRIGGS, *Secretary*.

MEETING OF THE BOARD OF OFFICERS AND DIRECTORS.

OFFICE OF DR. GEO. N. BURWELL,
No. 130 Pearl St., Dec. 15, 1882.

Dr. George N. Burwell, President of the Association, in the Chair.

All the members of the Board were present.

On motion of Dr. Hopkins, the President, Vice-President and Librarian of the Association were appointed a committee to draft by-laws, to be submitted at the next meeting of the Board.

On motion of Dr. Mann, the President appointed Drs. Granger, Hopkins and Frederick a committee to select a location for the library, and report at the next meeting of the Board.

Adjourned subject to the call of the President.

A. H. BRIGGS, *Secretary*.

Editorial.

LAW AND MALPRACTICE.

A recent suit for slander in one of our highest courts illustrates some points of interest to the medical profession, and also to all citizens who desire law and justice to be synonymous terms.

The facts in the case are briefly these: A prominent surgeon of this city, of large and mature experience in both civil and military surgery, is called by a practitioner to a neighboring

town to the case of a young man, injured by the cars. Shortly after the surgeon's arrival, and twenty hours after the time of injury, the right arm of the patient is amputated near the shoulder. A few days after the operation, a so-called eclectic physician, a graduate of the Payne school of Philadelphia, accompanied by one or more members of the patient's family, visits this city, bringing the amputated arm, and solicits the opinion of several of our city surgeons in regard to the necessity for the operation. As a result, the eclectic is sued for slander by the surgeon who performed the operation, and in turn the surgeon is sued by the relatives of the young man for malpractice.

In the suit for slander, the trial of which occupied a week or more, the plaintiff sought to establish slander, to which the defendant replied by an allegation of malpractice. The plaintiff replied by asserting the necessity for amputation. It is only the second and third parts of these proceedings, viz., the medical, to which we desire to direct attention.

The history of the case, as elicited by the trial, is as follows: A young man, under twenty-one years of age, while coupling cars, had his arm caught between the buffers. A physician is immediately summoned, who accompanies the injured man to his home, and, upon reaching the house, another physician is called in consultation. Appreciating the serious nature of the injury, the city surgeon is called. Before resorting to surgical measures, another physician is summoned. These four medical men testify unanimously as to the necessity for the amputation. The eclectic physician who was allowed to examine the case is the only one of the five physicians who failed to see the imminent necessity for amputation.

After the lapse of about two weeks, the amputated arm is examined by several surgeons. The bones of the arm and forearm are produced in court. They exhibit numerous injuries in the region of the elbow joint, pieces of bone being split off in several places. The question turns upon the condition of the circulation in the injured arm at the time the operation was determined upon, the defense claiming that the arm was simply caught so

as to pinch the back of the arm in the middle of the triceps muscle, and that the arm, for this reason, was not seriously injured and should have been saved. The plaintiff argues, the condition of the bones proved that the arm was injured at the elbow; the circulation had ceased for a number of hours; incipient mortification was present, and therefore the life of the patient depended upon immediate amputation. The testimony of four physicians, and the attendants who were present after the patient reached his house, was to the effect that the arm was distended to double its normal size by extravasated and infiltrated blood. The testimony of the surgeons to whom the arm was subsequently submitted for examination was very contradictory as to its condition and the extent of the injury. Some testify positively that the bones were not injured, and one of the number swore that he failed to find any bony lesion; another, that the arm showed that it had not been swollen, and that three weeks after the operation he could judge as to the necessity of amputation of the injured member; others testified as to the destruction and absence of important veins and nerves, and to serious injuries to bones, and also maintained that the medical men, examining the arm prior to the amputation, are, *par excellence*, the proper judges of the case.

From this mass of conflicting medical testimony a jury of apparently far less than average intelligence, and certainly with no technical knowledge, is called upon to decide between the true and the false, the law and justice; indeed, to weigh the facts in the case and render a just verdict. Was there ever a more stupendous farce? The questions of some of the jurors, without considering the verdict they rendered, stamp the trial as a comedy of errors, with ignorance and prejudice for the prominent factors. Is this a trial by one's peers, or is it a travesty on justice?

THE BUFFALO MEDICAL LIBRARY ASSOCIATION.

Under "Society Reports" will be found the proceedings for the organization of a Medical Library Association, a movement called forth by an urgent necessity long felt by the medical pro-

fession in this city. We are gratified to witness the enthusiasm with which the profession enters into the formation of this society, and to give our endorsement to the ultimate objects for which the society is called into existence. Heretofore the severe conservatism of our city in its commercial relations has extended its influence to all efforts upon the part of the few to provide facilities for the advancement of the interests of scientific and professional study. A sudden breaking loose from these hide-bound ideas has given our city a great impetus in its financial and commercial interests and progress. A like zeal is breaking out in professional circles, and among the evidences of this new life in the profession is the demand for greater library facilities than the private libraries afford, for reference, study and research. The interest is so wide-spread in this movement, that assurance is given of its ultimate success. We need not point out, in this connection, the advantages or even the necessity for such a library. The late meeting for its establishment clearly demonstrates that they are acknowledged by all.

We learn that it is contemplated to join, as auxiliary to the Library Association, a bureau for nurses, in which all thoroughly skilled nurses may be registered, and through which the profession may, at any time, acquire all needed information in regard to their capabilities and whereabouts.

Such an institution may become the centre of great usefulness and convenience to the profession and the public. We shall have occasion to refer to the subject again and to place its objects and its needs before the profession.

EDITORIAL NOTES.

THE "Annals of Anatomy and Surgery," in the few years of its publication, has so far won the confidence of the profession that it is now regarded as one of the most valuable journals issued in this country. The coming volume will contain yet more important features for the special field to which the publication is devoted. We commend it to those of our readers whose tastes lead them to devote special attention to surgery and anatomy.

WE are glad to note the appointment of Dr. F. Peterson as Lecturer on Pathology, and Curator of the Museum at the Buffalo Medical College. Dr. Peterson proposes to give special attention to pathology, and will make microscopic examinations of fluids and tumors, and post mortem examinations, when desired, for a reasonable fee. The college is to be congratulated on securing the services of Dr. Peterson, who has studied with the great European masters in this department; and we hope the profession will utilize their morbid specimens by sending them to him. They will then be carefully examined, labeled, and preserved in the college museum.

MANY of our readers will be glad to learn that the fifteenth edition of the United States Dispensatory will be ready in January, 1883. The editors are Dr. H. C. Wood, Professor of Materia Medica and Therapeutics in the University of Pennsylvania; Joseph P. Remington, Professor of Pharmacy, and Samuel P. Sadtler, Professor of Chemistry, in the College of Pharmacy of Philadelphia. The revision has occupied about three years, and from the high reputation of its distinguished editors we are sure that it has been in all respects most thorough and complete, embracing the most recent discoveries in Materia Medica, Pharmacy, Chemistry and Therapeutics.

WE are in receipt of the December number of *The Electrician*, a valuable publication. In its columns new discoveries and inventions in electricity are described and illustrated in a way to interest, not only the scientific, but the general reader. It contains illustrated articles on "Sporting by Electric Light," "The Prosch Telegraph Key," "The Grescom Motor," "The Fuller Electric Light System," "The d'Arsonval Telephone" and "Electrical Sketches." Also, able papers on "An Excursion in a Torpedo Boat," "On the Manufacture of the Weston Carbon," "The Future Electric Lighting," "On the Gold and Stock Telegraph System," "On the Munich Electrical Exhibition," etc., etc. It is published by Williams & Co., 115 Nassau street, New York, at the low price of one dollar per year.

Reviews.

Microscopical Morphology of the Animal Body in Health and Disease.

By C. HEITZMANN, M. D., late Lecturer on Morbid Anatomy in the University in Vienna, Austria. With 380 original engravings. New York: J. H. Vail & Co., 21 Astor Place. 1883.

We have here a very valuable book, embodying the results of ten years' intense labor by one admirably fitted for the task to which he had devoted himself. The volume also records the labors of several men who have devoted much time to original investigation under Dr. Heitzmann's direction. Viewed as a whole, the work will add fresh laurels to American authorship. We think, however, that the author claims more for the microscope than will ever be realized by that already invaluable instrument. He claims to be able to tell the constitution of a person, without knowing anything of his former life, by a microscopical examination of his blood, and proposes that marriages should be permitted in doubtful cases only upon the permit of a reliable microscopist. As an illustration, he gives the following incident, which sounds rather Salisbury-like: A young physician fell in love with his cousin, and the cousin reciprocated the attachment; but the physician's *science* prevented him from falling head and ears over in love so as to be blind to consequences, and Dr. H. was, therefore, consulted. The result we give in his own words: "I examined his blood and told him that he was a 'nervous' man, passing sleepless nights, and had a moderately good constitution. The condition being suspected in the kindred lady, marriage was not advisable, for fear that the offspring might degenerate. So great was his faith in my assertion that he gave up the idea of marrying his cousin, offering her the last chance, viz., the examination of her blood. This beautiful girl came to my laboratory, and very much to my surprise I found, upon examination of her blood, a first-class constitution. The next day I told the gentleman: 'You had better marry her.'" We do not give this interesting little story as a sample of the book, by any means. It is impossible, in the limited space at our command, to call attention to its really admirable qualities. The nineteenth and twentieth chapters, which treat of the "Urinary Tract" and "The Urine," are alone well worth the price of the book to any scientific physician. Again, we repeat,

the book is an admirable, and, in many respects, an original one, and no physician's library is complete without it. The illustrations are all made directly from Dr. Heitzmann's drawings; and it is refreshing to see a book with original plates. The publishers have brought out the book in excellent style. The print is clear and distinct, and the volume contains nearly 900 pages.

A System of Surgery, Pathological, Diagnostic, Therapeutic and Operative.

By SAMUEL D. GROSS, M. D., LL. D., D. C. L., Oxon., LL. D., Cantab., Emeritus Professor of Surgery in Jefferson Medical College. Illustrated by upwards of 1600 engravings. Sixth edition; thoroughly revised and greatly improved; in two volumes. Philadelphia: H. C. Lea's Son & Co. 1882.

Already some years have passed since the whole profession united in testifying their appreciation of the noble life and work of "America's most distinguished surgeon" on the occasion of the semi-centennial of his connection with medicine. Few, we think, supposed that he would add new honors to his name, after having so well served the profession and mankind for more than three score years and ten. It is but recently that we noted, with regret, that he had laid down the crown of the teacher; but it is with surprise and delight that we find that he has taken up anew the sceptre of the author. The first edition of "Gross' Surgery" appeared in 1859. From time to time, as the editions were exhausted, it was revised and improved; but, we doubt if any of the previous revisions evidence so much labor, thoroughness in revision and general improvement, as does this sixth edition. Almost every chapter has been re-written, a large amount of new matter introduced, and the whole work is a complete and faithful exponent of the art and science of surgery, as it exists to-day. To Prof. Lister he accords high praise as one of the world's eminent benefactors. He has the wisdom, too, to appreciate the triumphs accomplished by specialists, and has called in some of the most distinguished of them to aid him in the preparation of the chapters on the respiratory organs, the eye and ear. E. C. Sequin contributes a lecture on cranio-cerebral topography, and Batty and Jayre have respectively contributed valuable matter relative to Oöphorectomy, and the treatment of spinal diseases. The general plan of the work is the same as in previous editions, which has met with general favor. H. C. Lea's Son & Co. have done their part of the work in a way worthy of themselves and of the book.

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No. 7.

Original Communications.

CANCER OF THE NECK OF THE WOMB TREATED BY SCRAPING—
DOUGLAS'S CUL-DE-SAC OPENED—RECOVERY WITHOUT
A BAD SYMPTOM—ABDOMINAL ENLARGEMENT
PROBABLY DUE TO HYSTERIA.*

A CLINICAL LECTURE DELIVERED AT THE HOSPITAL OF THE UNI-
VERSITY OF PENNSYLVANIA, NOV. 1, 1882.

BY WILLIAM GOODELL, M. D.

Professor of Clinical Gynecology in the University of Pennsylvania.

GENTLEMEN—The history of this case alone will, I think, enable you to make the diagnosis. It is as follows: She is forty-two years of age, has had eight children, the youngest of which is two years of age. She has done her duty to the commonwealth, and in these days when there is often but one child in twenty years, a woman who has had eight children is worthy of a civic crown. Her labors were so easy that a physician was never called to any of them. During the past year she has had a very offensive discharge. The menses were regular until two or three months ago, when the discharge appeared every two weeks, for two or three times, but there was an in-

* Specially Reported for the BUFFALO MEDICAL AND SURGICAL JOURNAL.

terval of a month between the last periods, which were normal in quantity. She complains of dull pain, and occasional shooting pains in the back.

What is the significance of an offensive discharge in a woman who has borne children? The first thing you think of is carcinoma, but the discharge might be due to something else. It might be produced by a fibroid tumor, which had become necrosed, but such a tumor would cause severe hemorrhage, metrorrhagia and menorrhagia. She has not had these. We may, therefore, put aside the idea of fibroid tumor.

Why would our first thought be of carcinoma? I have told you on previous occasions that this is not a disease of virgins and sterile women. It is rare to find it in women who have not borne children. I have never seen it in such a case but once, and even then I should not be willing to swear that the woman had never borne a child. I believe the reason that carcinoma of the neck of the womb is almost exclusively found in those who have born children, is because it has its seat in a laceration of the cervix. The laceration does not heal; the delicate epithelium is exposed to abrasion from coition and to abrasion from locomotion; the denuded surface is kept raw, and all raw surfaces are liable to degenerate.

How many kinds of cancer are there and how shall we treat them? Are we, so to speak, localists or constitutionalists? There are three varieties of cancer which may attack the neck of the womb, but I believe them to be different expressions of the same form of disease. In the first stage we have scirrhus, in the second we have epithelioma, and in the third (which we rarely see) encephaloid.

Epithelioma is the variety which is most frequently met with. It occurs in two forms, the excavating ulcer and the vegetating. The former is the most common. In it the cervix is found enlarged from the deposit of inflammatory matters which may or may not be of a cancerous nature. In the centre we find, usually, an excavated sore resembling the crater of a volcano, sur-

rounded by a hard margin and containing friable granulations which bleed on the slightest provocation.

Is this a local or constitutional disease? Under what banner shall we range ourselves? If we accept the opinion that it is a local disease, we may accomplish great good, but if we consider it to be constitutional, we may as well sit down and fold our hands, for we can not hope to effect any improvement by local measures. My own conviction, or rather, let me say, my own impression is, that cancer is at first a local disease, and that as the disease continues, it becomes constitutional. My reason for this opinion is that in three cases I have accomplished an absolute cure by local means. In other cases the disease has been kept in abeyance, and in still other instances, it has never returned in the cervix after having been once removed, but has attacked some other organ. As I have said, my opinion is that it starts as a local disease, and if we see the case in the early stage, we may hope to effect a cure, which in a later stage, after the disease has become constitutional, is impossible.

There is a wide-spread error against which I desire to warn you. In thinking of cancer, we usually think of it as a disease accompanied by severe, lancinating pain, but this is not the case in cancer of the cervix. The cervix is by no means as sensitive as other portions of the body. As you know, we can hook tenacula in it, and even burn it with the hot iron, and cause little, if any, suffering. The disease may, at the beginning, be without pain, but as it advances to the internal os, pain is experienced, and when it involves the cavity of the womb, the woman suffers the tortures of the damned. I know nothing which equals the agonizing pain of cancer of the cavity of the uterus.

Having discovered a cancer, what do you tell the patient? In answering this question, I shall describe a case which I saw this morning. A lady was brought to my office by her physician, who suspected that she had a cancer of the cervix, but not being certain, desired my opinion. She was a stout woman, the

mother of eleven children, ten of whom were living. Four years ago, after the birth of her last child, she began to lose a little more than usual, and soon she had a constant dribbling. She did not have the cancerous cachexia, and I therefore expected to find a polypus. As soon, however, as I examined her, I found that it was a cancer, the whole cervix being eaten away. I asked the lady to step into another room; I then told the physician what I had found, and he agreed with me that we should not tell her the exact nature of the trouble. We told her husband, however, that his wife had a cancer, and asked him if we should tell his wife. "No," he said, "do not tell her." Never say "cancer" to a woman, if you can possibly avoid it. You are signing her death warrant, and at once she gives up everything and goes down hill. I have had patients who, I am sure, knew what the disease was, and yet the word "cancer" never passed their lips. They always spoke of it as "the disease," or "the ulceration."

After talking the matter over with her doctor, I told her that she had a bad ulceration of the womb, and that we were going to help her as much as possible, but it was very hard to cure.

In reference to the treatment of this case, I said to the physician: "This woman has but a short time to live, and we must make the few remaining months of her life as comfortable as possible. Give her as much morphia as is necessary to relieve her pain. Give her a solution of morphia containing a quarter of a grain to the teaspoonful, and let her take it as she requires it." He objected to morphia in solution, because there were so many children about the house. We therefore substituted Schieffelin's granules, containing one-eighth of a grain of morphia, to be taken as often as was necessary. Morphia in solution is the best form of opium in these cases, because it is the cheapest. These patients must become opium eaters. Let the few days of their existence be free from pain. Give them a euthanasia, a pleasant death.

There was no use of attempting local treatment, but in order to build her up and retard the progress of the disease, I ordered her after meals a solution of the four chlorides :

℞ Hydrarg. Chloridi Corosivi, gr. $\frac{1}{24}$.

Liq. Arsenici Chloridi, gtt. ij.

Tinct. Ferri Chloridi.

Acidi Hydrochlorici Diluti, aa. gtt. x. M.

To check the dribbling, I ordered injections twice a day of strong cider vinegar, as hot as possible. If this failed, a saturated solution of alum is to be substituted. If both fail, then Monsel's solution (one part to five of water) will be employed. I do not like the latter injection because it causes plaster-like clots, which are apt to remain in the vagina, causing an offensive discharge.

Let us now turn to our patient. In order to show you the color of the skin I expose her breast. There is a sort of ashy, leaden hue, but it is not very marked. This hue is pathognomonic only after the cancer has become ulcerated. It is never seen in the scirrhus form. It is not due to the impregnation of the body with the cancer poison as such, but to the distribution of a poison from the local sore, septic in its character. This is shown by the fact that when these friable vegetations are removed, converting the cancer into a healthy sore, the cachectic appearance passes away and the natural color returns. You must not depend upon the color in the diagnosis of carcinoma, for I have seen cancer in women of a florid appearance. In such cases, my experience is that operation is of but little benefit.

There is a very bad odor from this vagina. My hand will be saturated. I should not like to perform an obstetric operation immediately after leaving this case. In order, however, to be prepared, I use only my left hand in gynecological operations, and reserve my right hand for obstetric manipulations. I am not fond of bad odors. I remember that our professor of practice used to say, when lecturing on diarrhœa and dysentery, that the stools of a patient ought to be as acceptable to a physician

as a bouquet to a lady. I have never found it so, and have never been able to overcome an invincible aversion to foul odors. Permanganate of potassium is the best substance for removing this smell, but it stains the hands so that they are not presentable for several days. I shall therefore first wash them with soap and water, then with turpentine, which is a good antiseptic, again with soap and water, and lastly with carbolized water; but even after all this I do not expect to be entirely rid of the smell.

I shall now pass my finger into the vagina. This is a bad case. The posterior wall of the vagina is just about being attacked by the disease. The anterior lip of the cervix is comparatively healthy. I feel a notch posteriorly towards the right, where the laceration, which was the beginning of the disease, probably occurred. This would indicate an occipito-posterior position of the head. With this serrated curette, I shall remove as much as possible of this friable tissue. I find a projecting mass as large as a marble, which I twist off. The operation is not going to do this woman much good, as the disease is too far advanced.

The dangers from this operation are very slight. I know of no operation in which the after-history is so devoid of interest. Macaulay says: "Blessed is that nation which has no history," meaning that history is made up of a record of wars, acts of cruelty and injustice. In the same way, we may say, that these cases are blessed, inasmuch as their after-history contains no unfavorable symptoms. There is rarely pain or fever. I never had a fatal result until three months ago. I had been in consultation with a physician in the interior of the state in regard to a patient with cancer of the cervix. I was to go to perform the operation; the time was set and the physicians invited to attend, when I received a telegram telling me not to come. She had heard that clover tea was an excellent remedy for cancer, and her physician, very properly, knowing the incurable nature of the disease, gave her an opportunity of trying it. She used it

for a month, but, finding herself no better, concluded to have the operation, and came to the city for that purpose. She arrived the day before I left on my vacation. I performed the operation. There was considerable hemorrhage which was readily checked. I left her in competent hands. Previous to coming here she had been allowed to have opium (which was entirely proper), and, thinking that we did not give her enough, got out of bed the night after the operation, and the succeeding night, and helped herself. This was followed by secondary hemorrhage, which carried her off. This is the only case of serious hemorrhage which I have met with after this operation, but where a cancerous cervix has been removed by the galvano-cautery, I have seen terrible hemorrhage and some deaths. One death occurred in my own practice and another in the practice of a friend. A third case of desperate hemorrhage occurred, in this building, in which life was barely saved. I shall never remove another cancerous cervix with the galvano-cautery. I very rarely use it for any purpose since the invention of Paquelin's thermo-cautery.

I have now removed a large amount of this friable tissue and can now insert four fingers into the cervix. Although, as I have said, this operation is not going to effect a cure, yet we are justified in performing it, for it will stop the hemorrhage, prolong her life and make her more comfortable. The older the woman, the better are the results from operation.

I should like to cauterize this with Paquelin's cautery, but, as our instrument is out of order, I shall employ nitric acid. By the way, let me say one word in regard to the use of the Paquelin's cautery. Never heat the platinum point to a white heat, for you are then liable to fuse the spongy platinum in the tip. If this is done, the instrument is useless. I know of no instrument maker in Philadelphia who can repair it.

I now have this as clean as possible; but here is something which I do not understand. I must examine and see where this little body comes from. Gentlemen, this is the second instance in which I have gotten into Douglas's cul-de-sac, in removing a

carcinoma from the neck of the womb. This little body (about the size of a marble) which I show you is the hydatid of Morgagni. I do not like to get into the peritoneal cavity, but Carl Braun, of Vienna, in removing a cancerous cervix, does not fear getting into Douglas's pouch. He places the wire of the ecraseur sufficiently high to remove all the diseased tissue, without reference to the position of the peritoneum.

This makes the fourth time that I have got into the peritoneal cavity when I did not wish to. The first time was in removing the neck of the womb with the ecraseur. I made an opening as large as a silver quarter, but the woman recovered without a bad symptom. The second instance was exactly like the present one. Two or three years ago, while removing a cancer from the cervix by scraping, I made an opening into the peritoneum large enough to admit two fingers. This case worried me considerably, but she had not the slightest fever, and at the end of ten days went to her home, a distance of several hundred miles. The third case was one of vesico-vaginal fistula which had been accompanied by such inflammation and sloughing that I could not find the cervix and could not determine the position of the womb. In order to find the womb I operated, and while carefully dissecting upwards suddenly found myself in the cavity of the abdomen. I could, without trouble, feel the ovary. I immediately put her to bed. Her temperature ran up, but she recovered. I again operated with extreme care, but a second time I opened the peritoneum. This time she did not have an unfavorable symptom, although as she had a vesico-vaginal fistula the urine must, on both occasions, have found its way into the abdominal cavity. In this case I finally closed the vulva. The fourth case is the one before you.

Having made the opening, I shall examine the uterus. This I find to be enlarged, but the disease does not seem to have attacked it. I can readily feel the right ovary, and I think that I feel the top of the left ovary, but I shall not disturb the parts in order to settle this point. It is well that the woman is on her

back, for if she were in Sim's, or the knee-breast position, the air would, at each inspiration and expiration, enter and be expelled from the peritoneal cavity; and I should not like the air from this room, which certainly is not very pure, to come in contact with the peritoneum.

I shall not make the application of nitric acid as I had intended, but shall thoroughly cleanse the vagina with carbolized water, put her to bed and give opium and quinia so as to be ready for any inflammation that may arise. If she were in a perfectly pure atmosphere, the danger would be very slight. The danger is from septic influences. I might say a word or two in regard to the hydatid of Morgagni. If you look in your dictionaries under this term, you will be referred to the corpora Morgagni, which are found in the testicle. The hydatid of Morgagni is a small body, a relic of foetal life, which hangs from one of the fimbriæ of the fallopian tube, by a neat little stem about an inch long. The function of this little body we do not know. It is normally about the size of a pea, but it is sometimes enlarged. It is my opinion that some cases of bursting cyst of the abdomen, in which the cyst increases in size, then suddenly bursts and refills, are due to enlargement of the hydatid of Morgagni; and also that some of those cysts which have been described as cysts of the broad ligament with a pedicle are in reality cysts of this organ.

Gentlemen, I could have disguised from you the fact that I had opened Douglas's pouch, but I say that every one of us meets with mishaps, and that man is the best surgeon or the best physician who makes the fewest mistakes and meets with the fewest mishaps. If, in your practice, you should meet with this accident, it will afford you great comfort to be able to look back and say that "Dr. Goodell, with all his experience, did the same thing himself." This is a mishap, inasmuch as I should not have scraped so far back if I had thought the disease had advanced so near the peritoneum. Although I have the authority of Carl Braun for opening the peritoneal cavity, I do not agree

with him as to its propriety, for the disease is a hopeless one. If by opening the peritoneum we could effect a cure, I should not hesitate. One object is not to shorten life, but to prolong it.*

HYSTERICAL ENLARGEMENT OF THE ABDOMEN.

Our next patient is a woman 49 years of age. She has had six children, the youngest of which is sixteen years of age. She has had one miscarriage. The menopause occurred two years ago. Previously to the cessation of the menses, she had a severe attack of hæmatemesis. Since then she has had several attacks, none of which have been as severe as the first. These have occurred at what would have been the menstrual periods, if she had been menstruating. For the past two years, the abdomen has been enlarging, and she states that there is a body protruding from the vagina.

Women, at the change of life, are very liable to grow fat and to suffer from distension of the intestines, nervous flatulency, due to disturbances in the circulation of the nerve and blood fluids. As a result of this enlargement, especially if the menses have ceased, the woman often imagines that she is pregnant. When such cases come to you, a careful examination must be made, and it is sometimes difficult to make a positive diagnosis. So that in this respect an abdominal enlargement is often an abominable enlargement.

Here the abdomen is of large size. Pinching up its walls, I find that there is at least an inch and a half of fat. Beneath the fat, I feel a hard body, which may be due to rigidity of the muscles. I shall try percussion. This is of great service in determining the character of an abdominal enlargement. I find resonance all over. In the epigastrium, a little pain is caused by percussion.

I can say, with a great deal of confidence, that there is no solid tumor in the lower part of the abdomen, for we have re-

* The opening of the peritoneal cavity was followed by no elevation of temperature or other unfavorable symptom. The patient recovered.

sonance. A tumor of any size would push the intestines to one side, and there would be flatness, except where, as happens in rare instances, a coil of intestine gets in front of the tumor. There may possibly be fluid in the peritoneal cavity on which the intestines float.

You observe that while I have been talking she has lost some of her nervousness; she has been thrown off her guard and the abdomen is flattening down. I should like to examine her *per vaginam*, but as the hour has so nearly expired, I shall postpone that until she is removed; but I am disposed to think that it is nothing but an hysterical tumor, due to an accumulation of fat and flatus. I am not entirely satisfied in regard to the cause of the epigastric tenderness, and it may be necessary to examine her under ether. In the meantime, I shall give her bromide of potassium, which is our sheet-anchor in these cases.

This accumulation of fat in women is a curious affair. I should esteem it a great favor if some one would give me a prescription which would, in the first place, diminish the amount of fat, and in the second place remove certain ailments to which fat women are liable: Fat men suffer from the inconvenience and discomfort caused by the excess of fat, but they do not have the obscure troubles that women have. Fat women are liable to have peculiar phenomena referred to the uterine organs, the exact nature of which I am not able to explain. Whether they are due to a loss of retentive power, or whether the sagging over of the abdominal walls causes a suction power, drawing the womb up, I can not say. I have sometimes thought that the sagging down of the heavy abdominal walls tends to produce a vacuum, thus causing a drawing up of the pelvic organs. As a rule, in these cases we find the uterus high up.

If this patient will return next week, I shall examine her under ether.

SOME POINTS ON THE HISTOLOGY OF MALIGNANT TUMORS.*

BY M. D. MANN, M. D.,

Professor of Obstetrics and Gynecology in University of Buffalo.

One of the advantages which has followed the introduction of the microscope into practical medicine is a more thorough understanding of the nature of the many new pathological formations which occur, from time to time, in the human body. These new growths, which we generally know under the name of tumors, while they have yielded some of the most brilliant triumphs to surgery, have, in the main, been somewhat vague and uncertain factors, or, at least, were so before the microscope turned its wondrous eye to the exploration of their hidden and complicated structure.

The discovery of the so-called cell doctrine was the necessary prelude to these researches, and it is to the originator of this doctrine, the great Virchow himself, whose name will always be honored as long as medicine is practiced as an art, or pursued as a science, that we owe the most valuable treatise ever written on the subject of tumors.

The point which has excited the greatest interest, and which has been most eagerly sought for, has been the discovery of some distinguishing mark by which, with the aid of the microscope, we should be able at once to distinguish those tumors having malignant characteristics from those which are benign.

From the great importance which, in the early stage of investigation, was given to the cell as a morphological unit, it was but natural that the mark of distinction should be sought in the varying characteristics of these bodies. So it soon became an accepted fact, with some pathologists, that cancerous tumors, for under this head were grouped all the malignant growths, contained certain cells, which, differing from cells formed in other tissues, were produced and found only in tumors of this class, and hence were characteristic of them.

*Read before the Buffalo Microscopical Club, January 9, 1883.

When brought to the test of experience, this theory broke down. Tumors which clinically showed the most marked malignancy did not contain a single cancer cell. It was shown, moreover, that the cells composing different varieties of malignant tumors belonged to different groups of cells, and that they had no close relationship one with another. So the doctrine of specific cell for cancer was given up, and the cancer-cell put in the long category of mistaken "facts," and is now delegated to the abode of myths. Still it haunts us, and we occasionally meet with allusions to it in the current literature of the day, which would seem to show that there were still some of its friends who had not heard of its demise.

With the fall of the cancer-cell there were other plans proposed for making easy the diagnosis of malignancy. One of the latest was that proposed by a surgeon who had dabbled a little in microscopy, but who had no adequate ideas of its limits. He proposed to extract a small portion of the tumor, and really invented a very ingenious harpoon for this purpose, and then, by examining the cells of the portion secured, and by determining their homologous or heterologous character as regards the tissues in which the tumors were situated, he expected to be able to determine the malignity or benignity of the growth in question. To aid us he gave a number of rules for the application of his method. But alas! when applied, these rules proved too much, for they showed that healthy granulation tissue was a malignant sarcoma, and a foetus-in-uteri was a cancer.

How, then, can we determine the nature of a new growth? What are the microscopical appearances on which we may rely for a diagnosis? This question is often a practical and pressing one, both to the surgeon and to his patient. I will answer it, in the first place, by saying that as yet there is no decided and special mark which microscopically distinguishes a malignant from a benign growth. Is, then, the microscope of no use in this matter? Can the clinician gain no knowledge, no light,

to help him in his difficult and often blind search after truth? To reply in the negative would be going too far; the truth lies between.

Let us see how the matter now stands. With the fall of the cancer-cell it was sought to determine some peculiarity in structure, which would separate the good from the bad tumors. But it soon became apparent that the line between malignancy and its opposite was a very difficult one to draw. It was found that tumors of a certain structure from one part of the body differed greatly in their clinical course from apparently similar structures in another part. It thus seemed evident that tumors must first be arranged in groups and classes, having a similar structure and that then, by long observation, the usual clinical course of each class must be determined as altered by seat, predisposition, age and many other conditions. This has now been done with a good deal of satisfaction as regards the more ordinary forms, but still leaving some rare and anomalous varieties, whose tendencies for good or for evil are in dispute.

The classes which we now recognize as malignant are the sarcomata and the carcinomata. While these two classes belong to the same group, as regards their malignancy, and also in structure, in that both are made up chiefly of cells, still they differ entirely as regards the nature of the cells of which they are composed, as well as in the arrangement of their ultimate elements.

The sarcomas belong to the connective-tissue group, and are composed of cells which resemble some one of the different cells which belong to this group. As a type they have embryonic connective-tissue. The cells are round, either large or small, with large nuclei or small, as the case may be; or they are fusiform or stellate, according to the member of the histological connective-tissue group in which they had their origin, or which they simulate. Thus we find sarcoma simulating cartilage chondro-sarcoma, also osteo-sarcoma, from bone; glio-sarcoma, from neuralgia. Again, the sarcoma may be

mixed with other elements, forming a class of mixed tumors whose exact place in the scale of malignancy it is very hard to determine.

But the recognition of the presence of sarcomatous tissue in a given tumor is at times very difficult, and is largely a question of judgment and must be decided only after a careful study of all the features of the case, clinically as well as histologically. For instance, a fibroma of the ear can hardly be distinguished, microscopically, from a fibro-sarcoma, taken from another part of the body. The history of the case, however, makes it clear at once. Again, the line between a simple chondroma and chondro-sarcoma, is sometimes very difficult to draw. The distinction lies in the number of the cells, the sarcoma being much better supplied in this respect than its type-tumors, the simple cartilage tumor. But to say just when the cells become numerous enough to warrant us in calling it a sarcoma, is a very nice point to decide. Here again the history of the case, the rate of development and the age of the patient, the presence or absence of other tumors, all come in to aid us in forming a just opinion and in hazarding a prediction as to its future course. Of all the points just mentioned, the rate of growth is the most prominent and important.

I well remember where the diagnosis lay between sarcoma and granulation tissue in a very obscure and doubtful case. The microscope was hardly able to decide definitely, but the fact that the tumor had been very slow in its growth and the ultimate discovery of a little pus in connection with it, decided the matter in favor of the inflammatory theory and the result justified the diagnosis. This leads me to a few further remarks as to the histology of these tumors. Composed of connective-tissue cells of some sort, the cells are held together by a distinct intercellular substance. This may be like the intercellular substance of cartilage or bone, or may be simply an almost undemonstrably fine reticulum of fibres and basement-substance.

Considerable importance must be placed on the number of cells as relative to the amount of intercellular substance. The greater the number of cells, as a rule, the greater the malignancy and the more rapid the growth. One peculiarity is the arrangement of the vessels. There are very few true vessels, the blood being carried through the tissues in channels which have either very delicate and thin walls or are more generally mere channels. It is this peculiar arrangement of the vessels which accounts for the readiness with which these tumors bleed, and it also explains the tendency to the formation of metastatic tumors in other places. These secondary tumors are formed by the breaking off of a tissue, and its conveyance by the blood stream into the general circulation. Here it is carried to the lungs, liver or some of the internal organs whose extremely delicate capillaries will not admit of its further passage; being thus fixed, the cells imbibe nourishment from the surrounding blood, and thus become the focus for new growths.

So much for the sarcomas. If they present difficulties, how is it with their near relatives, the carcinomata?

These tumors are justly described as being epithelial in their nature. If we adopt the theories of Waldyer, Bilot, and their fellow-workers, and decide that no tissues are indifferent, but that like is only produced by like, we must suppose that a carcinoma can only originate in a tissue having epithelial elements. The name was formerly used, like the English term cancer, to designate any form of malignant tumor. But now that we understand better the histology of these functions, we limit its application to those tumors having cells like the epithelial cells. But besides the epithelial cells there are other elements. There is a distinct connective tissue stroma, and it is in the cavities of this stroma that the cells are found, while the vessels run in its substance. The cells are huddled together, often without any attempt at arrangement, and without intercellular substance. But this general plan of arrangement is often modified. In one variety of carcinoma, which we distinguish by the unfortunate

name of epithelioma, we often find a distinct arrangement of the cells in tubular follicles, or covering tufts. The cells also resemble, very closely, the tissue from which they spring, be they large or small pavement epithelium or the familiar cylindrical cells, such as are found so plentifully in the gastro-intestinal tract. The flat cells are often closely packed into concentric nests or pearls, an appearance which was long thought to be characteristic of this form of growth, an opinion, however, which is now acknowledged to be a mistake, they having been found in other growths and under other conditions. It is in this division of the carcinoma that we find the greatest difficulty in making a diagnosis. They trend so closely, on the one side, towards the adenomata or glandular tumors, and on the other to what have been called the true carcinomata, that the line between them is very hard to draw. Here, again, the history of the case, the seat of the tumor, the rapidity of its growth, all come to our aid, and are simply indispensable in enabling us to make a prognosis.

The true carcinoma consists, like the last considered variety, of connective-tissue stroma and of cells. The stroma is either dense and abundant or scanty and soft. In the first instance it is called scirrhus and in the second a medullary or encephaloid growth. The cells are of an irregular type, with large and distinct nuclei. They can be recognized as being of an epithelial type, but they do not exactly resemble normal epithelium, and are often malformed and misshapen. It is to this rapidly growing epithelium that we owe the myth of the cancer-cell, and we are now in a position to see how it came to have its original position, and the cause of its downfall.

Thus far, while describing to you some points in the histology of malignant tumors, I have, as it were, been entering a plea for the microscope, and for a proper understanding of its true position in reference to the very important matter, the diagnosis of tumors.

A great deal of misunderstanding exists at present in the mind of the medical profession, and only a few days since I saw the remark of a distinguished clinician that he had ceased to place any dependence on the microscope as a means of diagnosis. As I have already pointed out, there is no absolute mark by which a malignant tumor may be distinguished from a benign, and in a difficult case an immense amount of experience and knowledge is necessary on the part of the microscopist to render his opinion of any value, and when he has given it, it is, after all, only an opinion and not an absolute dictum.

The sooner this is understood the better for the credit of our instrument, the sooner will its true value be appreciated and understood. Too much reliance has been placed on its revelations. It has been thought by the uninitiated that we would see, with our lenses, the word "cancer" printed on every cell and every fibre, and that all that were necessary was to have a small bit of a suspected growth to enable us to say absolutely as to its character.

I have pointed out to you this mistake and have insisted that the microscopical appearances are to be considered as only one factor, a very important factor to be sure, but still only one among many in forming our opinion as to the true nature of a suspected tumor. That experience and skill are very important on the part of the microscopist, and that only in well marked cases is his opinion to be placed in advance of that formed by the careful and experienced clinical observer.

Clinical Reports.

A CLINICAL LECTURE DELIVERED AT THE HOSPITAL OF THE
SISTERS OF CHARITY, JAN. 13TH, 1883.

BY W. S. TREMAINE, M. D., U. S. A.

GENTLEMEN—The first patient I show you to-day is the man you may recollect having seen before and who is suffering with cystitis. I think it desirable in clinics that students should be shown the result of treatment. It is quite the fashion to operate, or to describe a case, and order some treatment, and then the class never sees it again and knows nothing of the results. I think the effects of the treatment should be shown, whether it be good or bad, and the progress of the case followed, because that is the proper way to obtain clinical knowledge of disease.

This man, whom we found had cystitis and whose urine was highly alkaline, has somewhat improved. When we first saw him, he was obliged to pass his urine about 24 times during the night. He now says that he only has to pass it about six times, and passes it in a larger quantity. He tells me that his original trouble has improved. Here is some of his urine. You see that it still contains some sediment, but not as much as before. I told you that in cystitis the urine was alkaline, on account of ammoniacal decomposition going on. We find that it is now acid, and in so far it has improved. The patient now complains of pain in the lumbar region, and that he was doing well, but within the last few days he has had what he called a "set back." I take it, from the region to which this man refers his pain, that there possibly is some pyelitis, that is, inflammation of the pelvis of the kidney. I yesterday examined some of this urine, microscopically, and found it loaded with pus cells. You cannot rely entirely upon the results obtained by microscopical examinations, but, as your distinguished professor of obstetrics told you yesterday morning, the microscope is a great aid in diagnosis.

I take it that there is some pyelitis, which may have come from the original trouble from which the man was suffering, but I have not time, to-day, to dwell upon this case or to repeat the points I have already given you upon this subject.

I merely show you this man to follow out the idea which I believe to be the true one, that students should be shown the results of the treatment ordered in cases brought before them. You see there is some improvement. The only object in showing it is to demonstrate that under the treatment of washing out the bladder the alkaline decomposition can be prevented. There is every reason to believe, from the improvement which has taken place, that the man will get well eventually.

I believe that clinical lectures should be confined to a few cases, and the symptomatology and the diagnosis should be amplified as much as possible, taking the cases as the text. In that way a few cases can be made more useful than a greater number in which you merely witness surgical operations.

I find in the ward a case which I present to you to-day for two reasons. In the first place, there is a condition of affairs which you will frequently meet with. Secondly, it contains instructive lessons in diagnosis.

As I have had occasion to say before, diagnosis is the most important art that you can acquire. It is an art to be acquired by long and patient observation of the phenomena of disease. What is it? It is the examination of the evidence and a legitimate verdict drawn therefrom.

That quality of mind which makes a man a good diagnostician, will make him a good judge. In the case of a patient we have the evidence obtained from the physical characteristics, and we have also the oral testimony given by the patient, or sometimes by friends. This oral testimony must be corrected by the physical examination and by the knowledge which the surgeon possesses of the function of the parts and the diseases to which they are liable. I say this because patients will lie to you, consciously and unconsciously. I lay stress upon the im-

portance of the art of diagnosis, because it is only in a clinic that you can learn it. Hereafter you will learn from examination of your own patients, relying on your own intelligence; but intelligence is of very little value, unless you have also intelligent experience. To learn to be good diagnosticians, then, is of great importance to you. You can learn a great deal in regard to treatment from your text-books, but not in regard to diagnosis. You must be told and shown what to observe and where to look for the lesions. It is not only necessary to become good diagnosticians, but necessary, also, to make a rapid diagnosis. You cannot leave a case and run to your books to consult authorities, so that you must be able to make a rapid and accurate diagnosis. I say accurate, approximately, because you can only approach more and more nearly to accuracy as your years of experience increase. You will never attain *perfection*, but you must constantly strive after it. This is why the opinion of age and experience, other things being equal, is of so much value, especially in surgery.

Before investigating that portion of the body of which the patient complains, it is, perhaps, well to refresh your memories regarding the anatomy and functions of that part. When we observe this patient we see there is a deviation from the normal in the vicinity of the knee-joint. I say in the vicinity of the knee-joint, because we have not determined whether it is inside of the joint or not. Let me first recall to your recollection some of the anatomical features of this region. First, we have the skin; beneath that the superficial fascia, and in this place a bursa; then the patella, and again a closed sac, called the synovial membrane, which has a special function. Then we have the cartilages and the ligaments; or, first of all, the ligaments, white fibrous tissue and very inelastic. In addition to that we have fibro-cartilages, then the ends of the bones composing the knee-joint. This joint has the largest synovial membrane of any in the body. Upon inspection, we find a swelling in this neighborhood that may be confined to any one or may

embrace all of these structures. First, in regard to the skin, when I pinch up the skin I find it compares very favorably with the other side, except that there is some removal of the epidermis, which is probably due partially to pressure and partially to counter-irritation. Then I find not much the matter with the skin, so that does not account for the injury or loss of function that this man complains of in this region. Suppose that this swelling was confined to the skin or subcutaneous or areolar tissue, the next step would be to ascertain the nature of it. Knowing, as we should know, the function of these parts, we are aware that serous effusion in the cellular tissue very frequently takes place, and is called œdema. I find that there is no pitting upon pressure, nor when I press upon it can I disperse the fluid, as I could do were this fluid in the areolar tissue. I ascertain, first, that it is probably fluid that causes this swelling; when I go further I find that it gives a sensation of fluctuation. In addition to that, when I press down upon the patella I get what is called knocking of the patella. That is, when I press down upon it and bring it in contact with the condyles of the femur, I get a characteristic feeling, which is called knocking, which I am not able to produce in the patella of the sound leg. The patella is lifted up as it was, then recalling your anatomy and knowing that the patella enters into the formation of the knee-joint and is covered with synovial membrane, I think it is probable that there is fluid in the joint.

Before proceeding further it is well to ascertain by measurement the difference in the two limbs. Always compare the diseased limb with the sound one. Measuring, then, at the knee, I find that the diseased one is an inch and a half larger in circumference than the sound one. Again, when I measure at the thigh, above the knee, I find that the sound limb is two inches larger than the other. Why is this? I think the condition of the knee-joint throws some light upon it. We have ascertained that there is a probability of fluid in the cavity of the synovial membrane; that is, in the cavity of the knee-joint, lined by

synovial membrane. How did that get there? What is the cause of it? Let us go further and get something of the history of the case. I will give it to you as the patient repeats it to me. Upon the 7th of November he received a severe injury, in this way: He was on board a vessel on the lake, and what is called the main-sheet, which, by the way, is not a sheet but a rope, caught him by the leg and jammed him against a block. As a result of that, he had severe pain and enormous swelling in this region. In such an injury it is well to inquire into the cause, in order to estimate the amount of force, and thus, to some extent, the amount of injury to the tissues. Had the history been that a car-wheel had passed over there I should have expected to find a different condition of affairs. Had that limb been crushed between two buffers of a car I should also have expected to find a different condition; so I allude to the history.

You will understand from what I have said regarding the way the injury was produced that there was a great deal of violence. The result was that a large swelling took place, much larger than at present. He further tells me that for ten days after that he had no treatment, and then he saw Dr. Heath, who treated this limb and brought it down to the present size, or rather, aided Nature to do so. Such is the history of the case, and I have indicated what the probable condition is. Now, what is that? Naturally you will say some disturbance in the synovial membrane, and being the result of violence you will probably say it is inflammation of the synovial membrane, and that it has resulted in increased effusion and alteration in character of the synovial fluid. But I spoke to you in regard to the difference in size of these limbs. You notice that the muscles of this limb are much smaller than those of the sound limb. Is there anything to account for this? It is noticeable, in this disease, that wasting of the muscles takes place rapidly, but in my judgment this difference is not entirely accounted for by the injury to the knee-joint. You see there is a flattening of the gluteal

muscles. The leg that is diseased is shorter than the other. Now the history of this case is that the man received an injury in childhood, and when he grew older his parents took him to a surgeon, and the surgeon stated that a fracture had taken place in the neck of the femur, and that it was too late to remedy it. I think that is probably the case. There is no history of hip-joint disease, and probably it is this old accident that has rendered this limb smaller than the other. So you must go farther than appears on the surface in all these matters, knowing, as you should know from your studies, that atrophy of the limb does take place in injuries of the hip, especially when occurring in childhood. In measuring the two limbs to compare them, remember that you will have to get the pelvis at right-angles to the axis of the body. Approximately, then, when we measure these limbs from the umbilicus to the border of the internal malleolus, we find a difference of an inch and three-quarters. We also find talipes varus. What caused that? That is due to the fact that the atrophy of the muscles has taken place somewhat irregularly, and that the action of the tibialis anticus has overcome the action of the peronei muscles, and that is the way in which talipes varus takes place. But to return to the knee-joint. In examining further you notice that on each side of the sound patella there is a furrow or pit, which, in the diseased limb, is obliterated. The synovial membrane is not a tight sac, but has certain folds and pouches, the ligamentum mucosum, and on each side of the patella the ligamenta alaria, not ligaments, but reflections of synovial membrane, a process or pouch extends up beneath the extensor tendon, and into which, you will remember, the subcranus muscle is inserted; its use is to pull this pouch out of the way when the leg is extended.

You will readily understand that when the synovial sac has an increased amount of fluid in it, that these folds are more or less unfolded, and the pouches distended; in this case you see the result; the inequalities of the joint are obscured and a

rounded, globular outline given. Now observe, when I place the palm of one of my hands lightly on one side of the joint and tap gently with the other hand on the opposite side, I feel a peculiar impulse from a wave of fluid; this sensation is very characteristic, when you are once familiar with it. I feel now quite satisfied that there is fluid in the joint, and taking into consideration the history of the case, and all the symptoms, our diagnosis is complete—synovitis; in its earlier stages, “simple acute synovitis,” now chronic.

A few words with regard to the nature of this synovial inflammation. Many causes contribute to it; over-exertion, strains, violence (as in this case), the rheumatic and strumous diathesis, syphilis, absorption of pus, a form of which results occasionally from gonorrhœa.

The nomenclature depends somewhat upon the cause, and sometimes from the character of the fluid; thus we have traumatic and rheumatic synovitis; again, according to the nature of the fluid, “simple synovitis” and “purulent.”

Let us glance for a moment at the pathology. When an irritation, from any cause sufficient to excite inflammation, takes place, the first effect is, of course, hyperemia and increased secretion of the synovial fluid; later, the engorged vessels relieve themselves by serous effusion, the normal endothelial cells are thrown off, white and red blood corpuscles wander out of the vessels, sometimes fibrin is formed. If the fluid be withdrawn and examined, it shows a milky or opalescent appearance; the degree of this, of course, varies as the cellular or serous element predominates.

The villous-like fringes enlarge; this takes place in a more marked degree in a form of the disease of which we have not time to go into to-day. When fibrin is more abundant, it becomes partially organized, adherent to the synovial membranes, constituting what is sometimes called “synovitis sicca,” or dry synovitis. But a history of these changes would involve the whole pathology of inflammation, which you must study else-

where. The subject is too interesting and too vast to include in one clinical lecture. Study it when you have time. You will be amply repaid.

I forgot to show you, before the patient left, the amphitheatre; that pain could be produced by extension of the limb. This is not clearly explained. Perhaps you know that we do not often have an opportunity to investigate these cases pathologically, as death of the patient does not often result; I am speaking of simple forms of the disease, but it is believed that this condition is brought about because there is a little lump of fibrin or portion of the inflamed synovial membrane that is pinched. There is also another reason which has occurred to me. You know there is a pouch there. Now, you understand that when that is in a normal condition, no pain will take place, but when it is inflamed and there is pressure upon it, pain will be produced.

Let us make a rough outline of the symptoms of synovitis. Swelling you always find. Redness, one of the other symptoms of inflammation, not always accompanies it. In fact, in acute simple synovitis it is not generally present. In the rheumatic form it is very characteristic. In the pyæmic form redness of a dark bluish cast is very common. In some of the strumous varieties the redness is something which is unmistakable in these cases. Now, with regard to pain: Always present, and generally of a very acute kind. Perhaps nothing gives more pain than a simple acute attack of synovitis. Immobility is another characteristic. There is, too, a peculiarity about this; there is a tendency to contraction of the flexor muscles, simply because the extensor muscles are more easily tired out than the flexors.

Another symptom which I pointed out to you was the wasting or atrophy of the muscles which takes place. So far as my reading goes there is no very pronounced explanation given of this. In some way which we do not clearly understand atrophy takes place: It is possibly due to the fact that the muscles of the thigh derive their innervation from the same source as the structures of the joint, and by the irritation of the terminal

filaments, trophic changes are produced; but you always find it takes place, and the longer the condition lasts the more marked will be the atrophy of the muscles.

Now, I have spoken of one form, simple acute synovitis. This may terminate in recovery; the fluid becomes absorbed; the cells undergo fatty degeneration, are found filled with fatty granules; these undergo absorption and the disease disappears. But, does the joint always resume its normal function? I think not. There is often a puffiness or distension, which leaves the joint in a relaxed and weakened condition. One result that these patients often complain of is that in making a sudden motion severe pain is induced. This relaxed state leaves the joint in a weakened condition, and they frequently seek treatment for it.

There are other forms to which I will ask your attention for a moment. You will readily understand that when inflammation of the synovial membrane occurs it may terminate, under ordinary good treatment, in a cure, or it may go on to suppuration; but suppose we have associated with it a peculiar diathesis, and we will allude more particularly to that called the "strumous." This exudation remains and becomes more milky and filled with flocculi, and the destruction of the tissue goes on, the separation of the membrane from the cartilages beneath, and finally erosion of the cartilages, and destruction, more or less, of the functions of the joint. This was formerly known by the name of "White Swelling," a very indefinite term. In this strumous synovitis, when examined pathologically, we find the gelatiniform exudation, destructive changes go on with necrosis of cartilages, osteitis of the articular ends of the bones, and possibly the case may terminate even in death of the body.

Now, with regard to treatment. My own judgment is that the sooner the fluid is evacuated the better. For that reason I commend to you the early evacuation of the contained fluid, but with certain precautions. You know that if you admit air into the joint, ordinarily, you will have resulting suppuration.

In former times this opening was made by valvular incision, by a long narrow knife; the synovial membrane was opened at the inner border of the patella and the fluid dispersed through the subcutaneous tissue. But since the invention of the aspirator we have a better method. Before using the aspirator, dip it into carbolic acid, and see that in its introduction no air is allowed to enter the joint. It is objected to this that the fluid recurs. If it does, aspirate again, and again; "tire it out." If it does it certainly would not get well under ordinary treatment. But you may go still further, you may stimulate or alter the nutrition of this membrane by injection of fluids which produce irritation; but do this with great care. You may inject a few drops of diluted iodine, and then by care prevent excessive resulting inflammation. The advantage of compression in producing absorption of fluids is very great. So, another method is by putting on pressure. One very good way is by compressed sponges. Another way is by the application of the rubber bandage, a solid rubber bandage. In the acute form of the disease one of the most important matters is to keep the joint in perfect rest. On the continent of Europe, they are in favor of the plaster of Paris bandage. I dislike that, because as the swelling goes down the plaster does not follow it and keep up the pressure. I also prefer that the joint should be open for inspection from day to day. I prefer that it should be slightly flexed on a double-inclined plane. The object of this is, that if ankylosis takes place the limb will be in better shape. It is also more comfortable for the patient. You cannot, by putting it on a pillow, insure rest. The administration of morphine will be necessary, of course, to quiet pain. Another form of splint is Hodgen's (this splint and its application was described), which is a modification of "Smith's anterior." When this is applied the whole apparatus is suspended by a cord to the ceiling, and the limb immobilized in that way. This gives great relief and enables the patient to move about considerably. I am in the habit of using that form of splint, and consider it decidedly preferable to the plaster of Paris apparatus. If you prefer to use

plaster, the best way is to use a posterior splint formed of several thicknesses of blankets or coarse flannels. To facilitate its setting rapidly, add alum to the plaster. (The manner of making this splint was shown.)

So much for the ordinary acute synovitis. When it becomes chronic, as in this case, I think puncture, that is, aspiration, is the best mode of procedure. Whether the fluid will be completely absorbed under the present treatment, I think is doubtful. There are other methods, stimulating plasters, mercurial plasters, etc. I think, in regard to liniments, that the chief benefit is in the massage, or rubbing; perhaps another advantage is the psychological influences upon the patient, but, I confess, I put very little faith in them.

I will, in a few words, allude to the treatment of the strumous form. When these destructive changes take place, it becomes a question whether the joint should be removed or the limb amputated, and this requires a good deal of judgment on your part. Let me urge upon you to decide the question in time, before your patient is exhausted. I recall a case where the man was very averse to having his limb amputated, and after months of suffering, the poor fellow was worn out and died. So that when these destructive changes go on, and erosion of the cartilages takes place, it becomes a question whether the joint shall be exsected or the limb amputated. I urge upon you, when you find this condition of things, to do something, otherwise the patient is likely to be worn out. Some operative surgery is necessary. The form of synovitis which produces these changes, occurs, as a rule, only in strumous subjects. This has been disputed. It has been stated that strumous synovitis never occurs, except as the result of an injury. I think it can occur in a certain class of cases which have a certain diathesis which we call the strumous. I do not go into the question of opening the joint under antiseptic precautions and removing the diseased structure; this I have done with success, and it is now quite frequently practiced; but the hour has expired and I must dismiss you.

ERYSIPELAS OCCURRING WITH PARTURITION.

REPORTED BY BERNARD BARTOW, M. D.

Mrs.—, æt. 27, was in the eighth month of her second pregnancy when her child, twenty months old, was taken sick with scarlatina. For two days she carried or held the child continually. From this cause she herself was prostrated, and had lumbar and abdominal pain, and frequent vomiting, compelling her to go to bed. She had been sick in bed one day when I first saw her (Dec. 23d). Her stomach had retained nothing for twenty-four hours; there was intermittent lumbar and abdominal pain, abdominal tenderness on pressure, burning pain in epigastrium; pulse 86, temperature 98.5°. The urinary secretion was normal in quantity and phosphatic. There was no constipation. She had not had scarlatina. Until the third day following, her condition did not materially change, notwithstanding the free use of morphia hypodermically, gastric sedatives, hot application to abdomen, etc. During that time the pulse and temperature continued normal. The afternoon of Dec. 25th she felt a sudden pain in the right hypochondrium; this was followed by a chill and rise of pulse and temperature—the former being 120, the latter 100.5°. The temperature quickly fell to normal and remained so, but during the 26th and 27th, the pulse did not fall below 120 in frequency, and at times beating 140 and 160 per minute. There was no corresponding acceleration of respiration. Until the latter date morphia was administered hypodermically to relieve the inclination to vomit that was constantly present. The patient then spoke of the absence of the foetal movements, during the preceding twenty-four hours; after that morphia, hypodermically, was discontinued, and given per orem instead, the danger of inducing narcotism of the foetus being less by the latter method.

The increased prostration present at that time, and the continued rapid pulse, led me to think there might have been partial detachment of the placenta at the time of having the pain

and chill (Dec. 25th). Her condition also had a resemblance to septicæmia, except that there was no elevation of temperature. From the susceptibility of the patient to scarlatina, it was also thought possible that the disturbance was due to that poison manifesting itself in an unusual manner, from the influence of a co-existing pregnancy. Dec. 28th, Dr. M. D. Mann saw the patient with me. Since discontinuing morphia hypodermically the movements of the fœtus had become quite strong (in the meantime the patient continued taking morphia per orem); the placenta was intact; there was slight abdominal pain or pressure; respiration and temperature normal; pulse 135. The prostration of the patient was quite severe, and beef tea and brandy only could be retained in small quantities. No diagnosis was made; but Dr. Mann was of the opinion that something was in process of development that would shortly "explode" and define the case; he advised Infus. Digitalis 3j. every third hour to lower the heart's action. The following morning the pulse had fallen to 96. The patient complained of pain in and around the right ear; the skin in those parts was puffy and tender to pressure. Dec. 30th, an erysipelatous eruption appeared on the right ear and the side of the face and neck, and during the following forty-eight hours spread over one-half of the face. The pulse was not greatly disturbed, and the temperature not all, by this event. After that the patient showed decided improvement of strength, and nourishment and stimulants in larger quantities were retained by the stomach. The third day after the appearance of erysipelas the woman was taken with labor pains. Coincidentally there was an aggravation of all her other symptoms. The erysipelas spread over the entire face; parts in which the eruption had subsided again became red, swollen and painful. The temperature rose to 102°, and the pulse to 140 per minute. Labor was completed in six hours. The child did not breathe well for several minutes after birth, and then the respirations were not vigorous. Before labor was ended the patient was moved into an unoccupied room, and as far

as practicable antiseptic precautions were employed. I made very few vaginal examinations, and was careful before each examination to wash my hand and arm with strongly carbolized water. Shortly before the head was expelled I gave the patient ten grains of quinine with a view to securing firm uterine contraction. Quinine in five grain doses was repeated every fourth hour. Directed brandy milk and beef tea to be given the patient as freely as could be borne; also, that carbolized cloths be kept continually over the vulva.

The day following her delivery the woman's pulse had fallen to 90, and the temperature to 99° ; and until the fifth day there was no disturbance of pulse or temperature, or any unfavorable symptoms that were dependent upon parturition. The erysipelas, however, continued to spread over the face and neck, and down the back until it reached the waist. The lochia were scanty but otherwise normal. Lactation was wholly absent. The infant lived only twenty-four hours, death beginning in the respiratory centre; life was maintained artificially six hours, during which there were frequent convulsions.

The sixth day after confinement the patient had a severe chill. Following this there was a gradual rise of pulse and temperature; by the eighth day the pulse reached 120, and the temperature $104\frac{1}{2}^{\circ}$. Pain over the uterus and in the lower part of the abdomen, and offensive lochia accompanied this change. During the forty-eight hours following the chill she took sixty grains of quinine, which induced cinchonism, but had no effect to reduce the temperature. The evening of the 8th day the uterus was washed out with one quart 3 per cent. solution of carbolic acid. The temperature fell 2° in the following ten hours, and the pulse from 120 to 108. The uterine injection was repeated the next morning, and at intervals of ten hours, for three ensuing days. After each operation the patient's temperature would fall 2° in the two hours immediately following, then it would slowly rise to $103\frac{1}{2}^{\circ}$. The intra-uterine injections were used four days; all local signs of metritis disappearing, the injections were then

discontinued. The temperature did not rise above 103° , and the pulse averaged about 104. She was then able to bear large doses of quinine and stimulants, and nourishment in good quantity.

At that time (the 11th day after confinement), she had a relapse of the erysipelas. The eruption again appeared on the face, and this time in a phlegmonous form; it re-appeared in a simple form on the back and gradually spread downward to the buttocks and forward over the front of the thorax. Forty-eight hours afterward the patient became delirious, had severe subsultus, high temperature, and a weak, frequent pulse. The third day of the relapse (15th day after confinement), there was extensive hypostatic congestion of the lungs. During the last two days of her illness the respirations continued at 40 per minute, often increasing to 50 and 60; the pulse varied from 140° to 180° , and the temperature from 105.5° to 106.5° . No signs of metritis or peritonitis were present during the relapse. The delirium continued to the end; death from exhaustion taking place the 24th day of her illness, and the 17th day after parturition.

Selections.

THE PYROGALLIC ACID TREATMENT OF PHAGEDENÆ.

The application of pyrogallie acid to phagedenic chancres is followed by such excellent results that we frequently return to the application used by M. Vidal during his service. There were in the ward two cases in which the phagedenæ had attained considerable size, and two or three applications of the pyrogallie acid sufficed to completely arrest the extension of the lesion. Two days later Vidal practiced auto-inoculation in these cases and the result was negative; he has, in fact, been able to demonstrate that the liquid secreted from the wound after the use of the acid loses completely its virulence. These tests can now be made with impunity, because we have in the pyrogallie acid a means of stopping at once the progress of any injuries that might

be produced. The application of the pyrogallic acid gives the wound a blackish color, about which there need be no concern. It should also be mentioned that this treatment induces about the base of the sore a slight induration which greatly resembles that observed in the syphilitic chancre, and might easily lead to error if one were not informed of this result. In cases where the wound was rather large and presented numerous irregularities or cavities, necessarily attended with considerable difficulty in applying the remedy to all its parts, instead of applying the salve he ordinarily used, M. Vidal makes application to its surface of a powder composed of one part of pyrogallic acid to four parts of starch. This application is renewed morning and evening, two successive days of the treatment generally being sufficient to completely modify the phagedenic character of the wound. The treatment is then continued by means of the sub-carbonate of iron.—*Journal de Med. et de Chirurgie.*

HYDRASTIN IN LARYNGEAL PHTHISIS.

Dr. Bird (*Australian Med. Jour.*) claims good results from the treatment of laryngeal phthisis with a spray composed of hydrastin, glycerine, borax and morphia. A combination of this kind would seem likely to be of advantage.—*Ibid.*

Correspondence.

COPENHAGEN, December, 1882.

To the Editors of the Buffalo Medical and Surgical Journal.

SIRS—According to the desire, expressed by the International Medical Congress at its 7th session in London, 1881, and in consequence of later discussions on this subject, it has been resolved, that the 8th session of the Congress shall be held in Copenhagen.

Especially in order to prevent collisions with other medical congresses, we beg to request that you will, already now, in

your esteemed journal, draw attention to the fact that the 8th session of the International Medical Congress will take place in Copenhagen during the days from the 10th to the 16th of August, 1884.

We are, Sir, Your Faithful Servants,

P. L. PANUM,

C. LANGE,

President of the Organizing Committee
of the Congress.

Secretary General.

Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Adjourned Meeting, January 9th, 1883.

President, Dr. A. R. Davidson, in the Chair. Dr. C. M. Daniels, Secretary.

Present—Drs. Cronyn, Samo, Stockton, Tremaine, Storck, Grove, Brecht, Wyckoff, Coakley, C. A. Ring, Hopkins, Fowler, Hartwig, Kamerling, Mynter, Strong, Bartow, Wall, Howe, Moody, Mackay, Johnson, Mann, and, by invitation, Drs. Elwood, Peterson, Berkes, Frederick and Hubbell.

Applications for membership received from Drs. Edward Clark, E. C. Waldurff, A. A. Hubbell, C. C. Frederick, Geo. E. Fell, H. D. Ingraham and Frederick Peterson, who were duly elected.

Dr. Mynter expected to present two cases with laryngeal affections, but at the last moment the patients positively refused to come to the meeting rooms, and he was, consequently, unable to fulfill his engagement.

Dr. Frederick Peterson exhibited four livers as pathological specimens. One was from a man who had been thrown from a wagon and had, together with fractures of the skull and two ribs, sustained sufficient pressure in his fall upon the abdomen

to drive the liver up to the third intercostal space and rupture it. The rupture was of stellar shape, through the capsule, and, as usual in ruptures of the liver, situated near the attachment of the suspensory ligament. About two litres of blood were found in the peritoneal cavity. The man lived three days. The liver was further remarkable in the fatty degeneration which had taken place as a result of the injury. It is rare to see an organ so fatty as this; it is soft, doughy, bloodless and yellow. The man having been apparently a well-nourished, perfectly healthy man, it is, of course, impossible to suppose that the organ was fatty before; and three days is quite sufficient for it to degenerate to such a degree. The speaker had seen the same marked fatty degeneration in liver of a girl of twenty, who died twenty-four hours after eating phosphorus from matches.

The next liver shown was one with ordinary cirrhosis taken from the body of a man accustomed to the use of alcohol in quantities. There had been, of course, the usual enlargement of the spleen, some dropsy of the abdomen, and chronic gastric and intestinal catarrh, from engorgement of the portal circulatory apparatus.

The third liver was one of marked syphilitic hepatitis. In this case were also the sequelæ of portal stasis, as in the case of cirrhosis. The difference between the interstitial hepatitis of alcoholism and that of syphilis is marked by great inflammation of the capsule and numerous peritoneal adhesions, by the large cicatrices and radiating masses of connective-tissue, and by the large, irregular nodules in the syphilitic; while in cirrhosis we have a most even distribution, more uniformity of size of the nodules upon the surface. Further in the interior of this syphilitic liver is to be noticed a large stellate cicatrix whose radii have pulled the liver substance all around up into hard nodules. This is apparently the seat of an old gumma, absorbed and substituted by connective-tissue.

The fourth specimen was one of red atrophy of the liver in heart disease. The man had hypertrophy and dilation of all the

heart cavities, and insufficiency of both mitral and tricuspid valves. As a result of tricuspid insufficiency there was venous engorgement and consequent pressure atrophy of the liver. In the liver cells are found particles of reddish pigment, from destruction of red blood corpuscles. The left lobe of the liver is scarcely to be found in this specimen.

Dr. Cronyn presented an instrument which, while not new in itself, was not generally known, and which he thought was of great value in many instances, it being "Parry Durham's improved urethral forceps." Dr. C. had the pleasure of having the *first one* ever made, it being the original obtained from London in 1869. The instrument is exceedingly useful where it is desirable to remove foreign bodies, either from the urethra, uterus or any narrow passage. Dr. C. showed two specimens, one a piece of willow $2\frac{1}{2}$ inches long, which had, by some "unaccountable" way, become firmly imbedded deep in the male urethra, resisting all ordinary means of removal, the other a piece of a knitting needle that had been broken off in the uterus. Both of these foreign bodies were quickly and easily removed with the instrument shown.

Dr. Howe gave the history of a case of *mastoid necrosis* in a child of eight years, it being a sequela of scarlatina. Showed specimens of bone removed.

Dr. Bartow reported a case of "Erysipelas occurring with labor." (The paper is given in the present number of the BUFFALO MEDICAL AND SURGICAL JOURNAL.)

Dr. Hopkins spoke regarding the favorable influence of washing out the uterus, upon high temperature, and said that in his experience thoroughly washing out the bladder had been followed by a lower temperature in a case in which previous irritation of the uterus had failed to procure that result. Referred to a case where a child, sick with scarlet fever, had occupied the same bed with the mother, who passed through an unusually severe labor. No puerperal complications followed.

Also, referring to fears expressed by Dr. Bartow of danger to foetus where morphia was administered to mother hypodermically, said he had given *two* grains every eight hours for three months before confinement, with no bad results, the maximum quantity being attained two weeks from its first administration.

Dr. Cronyn said that Dr. Bartow's case was full of interest, and to him seemed to prove that there was a unity of poison between scarlatina and the erysipelatous condition, and that pathologists had found the uterus, in similar cases, to be in a like inflammatory condition. Related a case in his own experience.

Dr. Strong regarded the case exceedingly interesting, and thought that the treatment was wise and admirable, especially commending the free use of quinine.

Dr. Bartow replied that he considered that a great portion of benefit obtained was due to the thorough washing out of the uterus.

Dr. Hartwig said that the treatment adopted was doubtless creditable, but in many cases he thought the patient was better protected where no uterine examination was made at all, as proved and advocated by Dr. Alonzo Clark. He wished, also, to take issue with Dr. Cronyn regarding the possibility of the transposition of poisons, believing it impossible for one to propagate other than its own specific disease.

Dr. Cronyn said, as the several fevers had so great a likeness, he should like to have Dr. Hartwig elucidate the difference.

Dr. Hartwig replied that the question was not a difficult one to answer, but it was not timely, at the present late hour, to enter upon its discussion. He had only to remind Dr. Cronyn that the specific poisons of the zymotic diseases always produce their individual and characteristic phenomena, and that all efforts to prove them related have failed.

Some rather active expressions of opinion between Drs. Cronyn and Hartwig followed, reminding some of the older members of the association of the earlier years in its history,

"when discussions waxed warm and were leading features of the meetings."

Prevailing Diseases—General pharyngitis, scarlatina, pneumonia, broncho-pneumonia and croup.

The President announced that Dr. Granger would read a paper at the next meeting; subject, "Paresis."

Adjourned.

CLAYTON M. DANIELS, *Secretary*.

ERIE COUNTY MEDICAL SOCIETY.

The annual meeting of the Erie County Medical Society was held at the college building on the 9th ult. The President, Dr. T. M. Johnson, in the Chair; A. M. Barker, Secretary.

The committee on membership reported in favor of the admission of Drs. A. A. Hubbell, C. Weil, G. Frank and George E. Fell.

The following new applications for membership were received and referred to the committee, F. H. Potter, J. N. Putnam, W. G. Gregory, E. H. Long, J. W. S. Hunter, J. H. Pryor.

Dr. E. Storck, chairman of the "Board of Censors," reported that the names of a number of persons practicing in violation of the law had been furnished the district attorney, but owing to a lack of sufficient proof the cases had not been, as yet, brought before the courts.

The Board were notified of a person in one of the country towns who was practicing illegally. They wrote him a letter in regard to the matter, and he at once had betaken himself to parts unknown.

Dr. F. F. Hoyer believed the proper place to try these cases was before a police justice. He said that conviction had been obtained in the police court in New York in several cases, and the violators fined.

Dr. J. B. Samo, Librarian, reported that during the year just closed the additions to the library were, a "Treatise on the Di-

agnosis and Treatment of Diseases of the Chest," by William Stokes, of Dublin, and a fasciculus, consisting of two large plates, of certain affections of the skin. Also, forty-four bound volumes of the *London Lancet*, these being a gift to the Erie County Medical Society, from Dr. John Boardman. These volumes date from the beginning of that valuable journal, in 1823, and extend to 1845, embracing a period of twenty-two years. The society is to be congratulated on the possession of so valuable a collection. A vote of thanks was extended to Dr. Boardman for the liberality and thoughtful kindness implied in his donation.

Dr. F. W. Abbott, Treasurer, presented his annual report. It showed that the society had expended one hundred dollars during the past year. This included fifty dollars legal expenses paid to A. G. Rice, attorney for the society.

The Secretary called the attention of the society to a blank book of certificates which had never been used. He suggested the propriety of purchasing a proper seal and furnishing each member with a certificate of membership.

He was directed to purchase such a seal and have a new list of the members printed.

The subject of the Code of Ethics, as revised by the New York State Medical Society, was discussed. The following resolution, offered by Dr. H. R. Hopkins at the semi-annual meeting in June, was taken from the table:

"*Resolved*, That this society approves of the recent action of the State Society in revising the Code of Ethics."

Dr. C. C. F. Gay moved, as a substitute for the above, that the "Erie County Medical Society disapproves the action of the State Medical Society, at their last meeting, in adopting the report of the special committee in revising the Code of Medical Ethics"

Dr. A. R. Davidson said that he was heartily in favor of Dr. Gay's resolution, but in his opinion it did not go far enough; he hoped that the sentiments of the society on this important ques-

tion would be expressed in no uncertain way. The resolution offered left our delegates free to vote on this question as their individual opinions dictated. It was well known that a majority of the delegates had already expressed themselves in favor of the New Code. While willing to give them perfect liberty in the discussion of the subject before the State Society, he believed that they should receive the instructions of the society as to how they should vote. He therefore presented the following as an amendment to Dr. Gay's resolution:

WHEREAS, The Medical Society of the State of New York, at its last annual meeting, did adopt a New Code of Ethics, which provides that "Members of the Medical Society of the State of New York, and of the medical societies in affiliation therewith, may meet, in consultation, *legally* qualified practitioners;" and,

WHEREAS, The clause above quoted is in direct opposition to the Code of the American Medical Association, with which this society desires to retain its relations, and also opposed, in the opinion of a majority of the members of this society, to the dignity and true interests of scientific medicine, therefore,

Resolved, That this society regrets the action of the State Society in adopting a New Code of Ethics, and respectfully asks that the action may be reconsidered and reversed at the next annual meeting.

Resolved, That the delegates of this society be instructed to vote, on this subject, in accordance with these resolutions, and that an authenticated copy of the same be forwarded to the Secretary of the State Medical Society.

These resolutions called forth a lively discussion, participated in by a majority of those present, during which the following letter was read by the Secretary:

To the President of the Erie County Medical Society:

DEAR SIR—I regret very much that on account of absence from the city I cannot be present at the meeting to-day. I consider it of vital importance that the County Medical Society should declare to-day, in no doubtful manner, that it sustains the honor, the dignity and the honesty of the medical profession; that it repudiates the late action of the State Medical Society, in doing away with the old Code of Ethics and substituting therefor a weak and ridiculous one, virtually acknowledging all the isms and false systems of the day. This action has already done much harm. Let us do all we can to prevent further mischief.

T. F. ROCHESTER.

A motion made by Dr. E. Storck to amend Dr. Davidson's resolution by striking out all that which pertained to the

instruction of delegates finally prevailed. Dr. Davidson then said that his resolutions, thus amended, did not materially differ in their effect from the original substitute offered by Dr. Gay and he therefore desired to withdraw them.

A vote was then taken on Dr. Gay's substitute for Dr. Hopkins' resolution, which was passed without dissent.

Dr. Matthew D. Mann, Librarian of the Buffalo Medical Library, in behalf of the trustees, asked that the library of the society be entrusted to their keeping. He stated that it would be placed in a more convenient location than at present, and every facility of access to its books would be offered to members of the society by the association. The request was granted.

The following officers were elected for the ensuing year: President, Dr. S. E. S. H. Nott, Hamburg; Vice-President, Dr. Henry R. Hopkins, Buffalo; Secretary, Dr. Arthur M. Barker, Buffalo; Treasurer, Dr. Frank W. Abbott, Buffalo; Librarian, Dr. John B. Samo, Buffalo.

Committee on Membership, Drs. E. T. Dorland, H. Mynter and T. M. Johnson.

Board of Censors—Examiner in Anatomy, Physiology and Surgery, Dr. E. Storck; Examiner in Practice of Obstetrics, Dr. M. D. Mann; Examiner in Materia Medica and Botany, Dr. A. H. Briggs; Examiner in Chemistry and Pharmacy, Dr. P. W. Van Peyma; Examiner in Medical Jurisprudence and Pathology, Dr. F. F. Hoyer.

Dr. Nott, the newly elected President, was conducted to the Chair, and the retiring President, Dr. T. M. Johnson, presented an address on "Pharmacy and Medicine." It had reference to the law introduced in the legislature, concerning the requirements of pharmacists. He urged the passage of the law and a rigid enforcement of its provisions.

A vote of thanks was tendered the Doctor for his able address, and a committee of three appointed, with Dr. Johnson as chairman, to consider the best method of carrying out the plans suggested in the paper.

Editorial.

DIRECTORY FOR NURSES.

In the January number of the JOURNAL, in directing attention to the Buffalo Medical Library Association, we intimated that it was contemplated to establish a "Nurse Registry Bureau," through which the profession may be able to secure at any and all times competent nurses. The necessity of a Directory for Nurses has been recognized for a long time, and we are gratified to witness a movement in the direction of the establishment of a Bureau having this specific object in view. In Philadelphia and Boston such directories have been organized and are in successful operation.

From the first annual report of the "Philadelphia Directory for Nurses" we glean some interesting facts as to the details of management, which, for the information of our readers, we beg to present. The nurse applies for registration and is supplied with the "application blank," which requires a statement of the name, age, address, qualifications, kind of nursing preferred, rates of charge, and both medical and family references. If the replies from the person referred to are satisfactory, the nurse is registered on the payment of a small fee, which has to be paid but once. Detailed inquiries are sent both to the physician and the family after every engagement is terminated, in order to learn more and more of the nurse's qualifications and faults, if there be any of importance. For information to those applying for nurses, a small fee is charged in case of an engagement.

One of the most important results secured through the Directory is the promptness with which calls in great emergencies are met. Cases of accident, sudden illness, etc., often brook no delay. Under our present system, or rather, want of system, it is impossible to obtain the needed assistance without considerable annoyance, and often only with great effort. The amount of time and trouble it saves physicians, who have been com-

pelled to search the city over for a reliable nurse, is, in itself, a positive convenience, as well as a great advantage.

It will be recognized at once that our city needs such an organized agency, the benefits of which will accrue to both the public and the nurses, giving to the former a medium for securing competent and reliable assistance and help in sickness, and to the latter a responsible Directory through which they can secure employment.

To the profession the Directory will prove a source of convenience and aid, and inasmuch as in its organization it will depend upon the encouragement and endorsement of the physicians of the city, we trust that this brief statement of its objects and purposes will be carefully considered. We will place before the profession all information in regard to its organization as soon as it is perfected.

THE ERIE COUNTY MEDICAL SOCIETY AND THE NEW CODE.

The annual meeting of the Erie County Medical Society was looked forward to with interest, as the occasion upon which the society would have to express itself upon the subject of the New Code. The matter was brought up at the June meeting, by the introduction of a resolution approving of the New Code. The matter was then warmly discussed, and an unexpected leaning toward the support of the resolution was manifest on the part of many members. The upshot at the time was the passage of a resolution to lay on the table. Upon calling up the resolution at the last meeting, however, no attempt was made to sustain it, its advocates undoubtedly despairing of success in supporting it, but expecting to accomplish all they could hope for by defeating the proposal to "instruct" the delegates. The quotation from Addison, "where liberty is gone life grows insipid and has lost its relish," which C. R. Agnew used as a text for his paper, entitled, "Limits of Medical Ethics," we have no doubt had as much weight in influencing certain minds, unable to distinguish between liberty and license, as the specious argu-

ments which make up his paper; and so here, too, a "Bawl for Liberty" arose from every advocate of the New Code present at the meeting. The "injustice" of placing any restriction upon the personal freedom of our delegates was dwelt upon, and the delegates present expressed themselves extremely unwilling to be "instructed." As the majority of them have already ranged themselves among the opponents of the American Code, this was not at all surprising. The action of the society in refusing to instruct leaves all of its delegates at perfect liberty to vote in accordance with their personal convictions, notwithstanding the resolution of mild disapproval of the New Code which was adopted.

EDITORIAL NOTES.

THE remarkable endorsement which *Dyspepsin* has received from the profession proves conclusively the good quality and value of the preparation. We are informed by druggists that the sale of it is constantly increasing.

THE new year has brought with it several changes in our contemporaries. The *New York Medical Journal*, the *Chicago Medical Review* and *The Sanitarian* have become weeklies; while several of the weeklies, notably the *New York Medical Record* and *The Louisville Medical News*, have been increased in size. All of the journals mentioned are ably edited and deserve the prosperity of which we trust these changes are an indication.

THE constant increase in the circulation of the JOURNAL affords the editors no little pleasure as an evidence that their labors are not in vain. The demand for back numbers also has so far exceeded our expectations that we are now unable to supply certain numbers. Any of our subscribers who do not preserve their volumes will do us a favor by mailing to us the numbers for April, July, August and September, 1882. We will credit their account with the full price of JOURNALS returned, 25 cents for each number.

WE desire to call attention to some valuable medical preparations which are worthy of receiving greater attention from medical men. Messrs. Wyeth & Bro. are furnishing compressed tablets

of Bisulphate of Quinine, which are readily soluble and cannot fail to dissolve when swallowed. While the writer was in Philadelphia, he critically examined the method followed by Wyeth & Bro. in preparing their compressed pills and other pharmaceuticals, with the result of decidedly increasing his previous high opinion of their preparations.

Reviews.

The Diseases of Women: their Pathology, Diagnosis and Treatment, Including the Diseases of Pregnancy. By GRADY HEWITT, M. D., F. R. C. P., Lond. Fourth American from the last revised and enlarged London edition. With one hundred and thirty-two illustrations. Philadelphia: F. Blakiston, Son & Co., 1012 Walnut street. 1882. Two parts in one volume. Price, \$1.50.

This is the cheap edition, in paper covers, of Dr. Hewitt's valuable work on diseases of women. We have reviewed the work in a previous number of the JOURNAL, and the favorable opinion there expressed need not be repeated here. The wide reputation of the accomplished author is a sufficient guaranty that this product of his pen will constitute an important addition to the literature of the subject or subjects on which he writes. We are yet inclined to the opinion, however, that so valuable a work should be in better binding.

Electricity in Medicine and Surgery. By GEO. C. PITZER, Professor of the Theory and Practice of Medicine in the American Medical College of St. Louis, etc., etc. St. Louis, 1883.

The author states in his preface that the object of this work is to furnish the medical student with a book containing the principal practical facts embraced by the subject of electricity and electro-therapeutics. He has certainly succeeded in his endeavor, and the medical man who is not much accustomed to the use of the battery will find this a most useful work, superior to many of the larger works, because everything is made as

plain and simple as possible so that the novice in the use of electricity in the treatment of disease will find here just the information he needs.

On Slight Ailments; their Nature and Treatment. By LEONEL S. BEALE, M. B., F. R. S., Fellow of the Royal College of Physicians, Professor of the Principles and Practice of Medicine in King's College, London; Physician to King's College Hospital, etc., etc. Second edition; enlarged and illustrated. Philadelphia: P. Blakiston, Son & Co., No. 1012 Walnut Street.

The first edition of this work was received with so much commendation, both from the medical press and practitioners, that it is hardly necessary to do more than announce that this second edition is now issued and that it contains all of the additions, illustrations and a complete index as in the last London edition. We venture to say that there are few books which will prove more useful to the young general practitioner, for whom it is more especially intended, than this able, practical work of Dr. Beale.

The Diseases of the Rectum; Including Fistula, Hemorrhoids, Painful Ulcer, Stricture, Prolapsus, etc., with Diagnosis and Treatment. By WILLIAM ALLINGHAM, M. D., F. R. C. S., Surgeon to S Mark's Hospital for Fistula and other Diseases of the Rectum. Fourth revised and enlarged edition, with illustrations. Philadelphia: P. Blakiston, Son & Co., 1012 Walnut Street. Paper cover, 75 cents; cloth, \$1.25.

This is the fifth volume of the octavo series published by Blakiston & Co. Unlike "Wood's Medical Library" series, one may obtain any one of the volumes at the merely nominal price of 75c. If the book could not be obtained at less than the price of the English edition (\$3.00), we would still advise all our readers who do not possess it to purchase it. We commend it particularly for its practical worth and as one of the most satisfactory guides in the diagnosis and treatment of diseases of the rectum to be had in the language. Already it has been translated into French, Italian, Spanish and Russian, and this fourth English edition has been carefully revised by the author.

A Practical Laboratory Course in Medical Chemistry. By JOHN C. DRAPER, M. D., LL. D., Professor of Chemistry in the Medical Department, University of New York, etc. New York: Wm. Wood & Co., 56 Lafayette Place.

This little work comprises what a young doctor ought to know about chemistry for his patient's good. Commonly there is an attempt made to teach too much chemistry to the medical student, the result being that as his time is so fully occupied with other branches which he considers more important, he neglects the study of chemistry in despair of ever mastering it. Dr. Draper has wisely limited his course, therefore, to instructions in manipulations and to the study of tests which are useful in forming a correct diagnosis or in solving hygienic problems. The arrangement of the book is very convenient, and we think it might wisely be adopted in all medical schools where students are expected to acquire a knowledge of medicine in a two year's course.

The Hospital Treatment of Diseases of Heart and Lungs; with over 350 Formulæ and Prescriptions, as exemplified in the Hospitals of New York City. By CHARLES H. GOODWIN, M. D. New York: Published by the Author, 255 West 53d Street, New York City. Price, \$1.50.

This volume of about 200 pages contains a resume of the treatment of the several diseases of the lungs and heart, as exemplified in the services of the leading physicians of New York City, connected with Bellevue, Roosevelt, St. Luke's, New York, Presbyterian, German, Charity, St. Francis and Mt. Sinai Hospitals. It is a decided improvement upon the numerous books of formulæ, which are as useless as they are numerous. This book has a real value, and it is interesting to compare the various modes of treatment adopted at the various hospitals. Under the head of "Pneumonia," for instance, the author gives the general treatment followed at "Bellevue" in the respective services of Flint, Loomis, Alonzo Clark, Thompson and Janeway—that of Dr. Draper, at the New York; Post and Smith, at the Presbyterian; Beverly Robinson, at "Charity," and Leaming, at St. Luke's. We would recommend the book as well worth buying.

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Original Communications.

ANTISEPTIC SURGERY.

BY W. S. TREMAINE, M. D.,

Major and Surgeon, U. S. A.

Antiseptic surgery has now been on trial for about ten years, and with such success that one might infer that it had been generally adopted and formed a well-recognized surgical proceeding. While this may be true of our larger cities, with their well-appointed hospitals, abundant opportunity for observation has taught me that antiseptic surgery, properly so-called, is not intelligently used by the average practitioner, and, indeed, neglected in some hospitals, to the manifest increase of mortality in surgical injuries. True, antiseptic agents are applied to wounds, but often to their detriment, and without any clear idea of the purpose for which they should be used, or with a vague impression that they in some way promote healing. Modern pathology, confirmed by clinical observation, has taught us that inflammation is not necessary to the repair of wounds, but, in fact, retards and interferes with it; therefore, the application of a strong antiseptic agent, while it possibly prevents sepsis, may

irritate and inflame, and thus delay the healing process. The inconvenience from this would be of slight moment as compared with the grave danger to life caused by the decomposition of the exudates in wounds. It is this recognition of the direful results from sepsis that has impelled surgeons to seek some process by which they may be prevented, even at the risk of retardation of the healing process, or of a small amount of irritation. It is against the results of septic infection that antiseptic surgery, as such, is directed, and not primarily, as has been supposed by some, to promote the healing of wounds.

That form of surgical dressing which will, in addition to perfect asepsis, prevent the other accidents to which wounds are liable, for instance, inflammation, tension, etc., must, by all, be admitted to be desirable, and to this end is directed the earnest effort of practical surgeons.

The writer has, for the past ten years, given especial attention to this subject, and as surgeon, for six years, to one of the great trans-continental railroads, and, later, while professor of surgery in Kansas City (a large railroad centre), has had extended personal experience in the treatment of wounds, both operative and accidental, which he believes is sufficient warrant for presenting his views in this way.

The great dangers consequent upon putrefactive changes in the discharge from wounds have long been recognized, and various methods have been, from time to time, adopted, with a view to lessen or prevent them. That some deleterious influence from the air was the most potent factor in the production of these putrefactive changes was apparent. The difference in the behavior of a subcutaneous lesion and an open wound early attracted attention. A marked illustration of this is to be seen in the contrast between a simple and compound fracture, and as it became evident that some deleterious agent derived from the atmosphere brought about decomposition in the exudates from wounds, the method of treatment by occlusion was practiced, and of this one of the best was that of Guerin by the use of cotton-wool. This proved

to be of great advantage in a number of cases of lacerated and gun-shot wounds. After a thorough washing with dilute alcohol, the cotton-wool was liberally applied and retained by a bandage, and in many cases allowed to remain without change until the wound healed. Notably, an excellent result was obtained by this method in a case where I amputated both arms and legs for frostbite and reported in the *New York Medical Journal* for January, 1882. In 1876 my attention was brought to the subject of Listerism. From that time to the present I have had a large personal experience in the use of this method of dressing, and have also had extended opportunities of seeing its practice and results in the hospitals of some of our large cities, and I must give it my decided approval; and this leads me to attempt to describe what is meant by Listerism.

Again and again I have heard surgeons say: "I have tried Listerism and do not approve of it." A closer examination of their method of practicing what they *called* Listerism, convinced me that they had but a faint idea of the process advocated and taught by Mr. Lister. For instance, I have seen ordinary adhesive plaster applied in strips, and then the dry, carbolized gauze put on, and *over* this the "protective"! Now, while this *may* be a form of antiseptic dressing, it is certainly *not* Listerism.

Again, I have seen an eminent surgeon (who informed me that he practiced Listerism but did not get the results claimed for it) deliberately lift up the dressings from a patient in a crowded ward of a hospital and replace them without the protection of the spray!

He who would successfully practice Listerism must believe in the "germ theory," for the practice is the logical outcome of this theory, and is not the application of any special therapeutic agent to a wound. It is, in short, a method of surrounding a wound with an antiseptic atmosphere while providing for the escape of the discharge. The essentials are these:

1st. Operating in an antiseptic atmosphere (produced by the spray), or if the wound be accidental (as distinguished from

operative), making it aseptic by the *thorough* use of a strong solution of carbolic acid (1 to 20), or of chloride of zinc (10 per cent).

2d. The prevention of any contact of septic materials, accomplished by using only *antiseptic* hands, instruments, ligatures, drainage tubes, sutures, etc.

3d. The prevention of the future access of germs by covering the wound with an antiseptic absorbent material (the gauze).

4th. The protection of the latter from germs when saturated with discharge by the use of an impervious covering (the Mackintosh or gutta percha).

5th. Physiological rest by infrequent removal of the dressings.

6th. The prevention of irritation from the dressing itself by the use of the "protective" between the gauze and the wound.

These, then, are the conditions of a complete surgical dressing, to place the wound in the best possible condition for healing, and to prevent the serious consequences that ensue from decomposition of the discharges. If Listerism does this, and without failure, then it is the best form of surgical dressing, and should be invariably used. But what are the objections to its use?

1st. It involves considerable paraphernalia.

2d. A thorough acquaintance with numerous minute details, a careful attention to which is essential to its success.

Objections which should have no weight if it can be conclusively shown that the process in its entirety is absolutely necessary to the complete protection of wounds. This is the essential question. If the germ theory is correct, then the principles of Listerism are necessary.

The question of the most effective and practical method and materials to carry out these principles is to be determined by experience, and, let me here say, chiefly, if not altogether, by *clinical* experience.

As usual when any new method has been generally successful, attempts are vigorously made to discredit the advantages, or to explain the benefits derived upon some other grounds. When this takes the form of a healthy and honest criticism, it is certainly most desirable. Accordingly, from time to time efforts have been made to disparage Listerism. The inconvenience of, and occasional danger of systemic poisoning from the carbolized spray has made it desirable that it should be omitted if it can be done with safety. There are various opinions in regard to this. My own is that where an operation is performed in what is believed to be a fairly aseptic atmosphere, that the spray may be dispensed with, and irrigation, after the operation is completed and before the dressings are applied, substituted; in short, as in all other matters, the necessity for the spray to be determined in each case by the judgment of the surgeon. In *redressing*, and particularly when done in a surgical ward, the spray should be invariably used.

For antiseptics to impregnate gauze, in lieu of carbolic acid, thymol and eucalyptus have been used; they have not proved satisfactory in my hands.

In 1878 my accomplished friend, Surgeon B. E. Fryer, U. S. A., Professor of Ophthalmology in Kansas City, brought to my notice the value of iodoform as an antiseptic dressing, and I think he is entitled to credit for priority of its use in this way. My personal experience with it is limited, but I believe in properly-selected cases it is valuable, non-irritant, and locally an anæsthetic, in this way vastly superior to carbolic acid. From its unirritating qualities, it permits of the omission of the "protective," and being less volatile than carbolic acid, the "Mackintosh" can be dispensed with, so far simplifying the dressing.

But the objections urged against carbolic acid, viz., the production of poisoning, apply, perhaps, in a greater degree to iodoform, and the report comes from Europe that even its use in small quantities is attended with danger from toxæmia, with the addition of erysipelas.

All this demonstrates that a perfect antiseptic has not yet been discovered, nor, for that matter, has a perfect anæsthetic. No one, however, would refrain from using ether because an occasional death occurred. One of the disadvantages of the Lister system that I early noticed was the rubber drainage tube. This, after a few days, acts as a seton, and should be removed, requiring a renewal of the dressings, always a drawback unless absolutely required to prevent wound accidents. I soon, therefore, omitted it in superficial wounds, or substituted carbolized cat-gut. The introduction of the decalcified bone tubes of Neuber is, in my judgment, a marked improvement. In a case where I amputated at the middle third of the leg, two of these decalcified chicken-bone tubes were used, the ordinary gauze layers applied, and over all a pad or cushion of the carbolized "jute," suggested by Dr. Weir, of New York, this covered by gutta percha tissue. But one dressing in all was applied, and on the twelfth day the man was walking about on crutches, with his stump completely healed. In another case, removal of a large lipoma from the region of the scapula, one of these bone tubes was used and but one dressing from first to last. Where the rubber drainage tubes are used it is a frequent practice to syringe them out with strong carbolized water, for the purpose of cleaning them. This is wrong. Where there is no evidence of sepsis in the wound the tubes should not be disturbed, beyond freeing their lumen from clots, etc., with an ordinary aseptic probe. Constant efforts are being made to improve and simplify the details. Among the latest ones may be mentioned the improved cat-gut ligature described in the *Lancet* for March, 1882, using chromic acid and sulphurous acid, requiring only a few hours for its preparation. This cat-gut has the advantage of being stronger, and it can be carried about dry, only needing to be soaked in carbolized water for a short time before using. One objection urged against the carbolized gauze is that it is not easily obtained by the country practitioner. Messrs. Seabury & Johnson, of New York, now

manufacture a superior article, enveloped in waxed paper and put up in air-tight tin cans of convenient size, which can be kept on hand till needed. Or, if the surgeon prefers to make his own gauze, this can be readily done by keeping on hand a quantity of the fabric known as "cheese cloth," rendered hygroscopic by boiling in a weak solution of caustic soda. This can be rendered antiseptic by soaking it in the following mixture, which is the formula of Brun: Resin, 400 grammes; carbolic acid, 100 grammes; castor oil, 80 grammes; alcohol, 2 litres. Or, the jute recommended by Dr. Weir can be used.

In the smaller class of wounds my usual practice is to wash them thoroughly with a solution of carbolic acid, three per cent., close them accurately with antiseptic cat-gut sutures, sprinkle a little iodoform on the wound, then apply a pad of salycilic cotton, over this a piece of gutta percha tissue, the whole secured by a few turns of bandage. A wound dressed in this way rarely requires a second dressing before it is healed. The freedom from pain and annoyance of frequent dressing delights the patient and saves the busy surgeon much unnecessary trouble.

During the past summer my attention was attracted to boro-glyceride, brought to notice by Prof. Barff, of London, in March last. I immediately prepared some, and through the kindness of my friend, Dr. Phelps, the attending surgeon at the Buffalo General Hospital, was enabled to test it upon some cases in the hospital. The results were excellent, the wounds healing rapidly without pain or the slightest irritation. Dr. Mann, the accomplished Professor of Obstetrics at the Buffalo University, has also used this agent with excellent results in ovariectomy. Mr. Barwell, of London, publishes a report of twelve cases, embracing major amputations and compound fractures, giving results that promise much for this new claimant for antiseptic honors.

In conclusion, I am decidedly of the opinion that a failure to use antiseptics in surgical practice savors strongly of criminal

negligence. In hospitals they are indispensable. In properly-selected cases that form of antiseptic surgery known as Listerism most surely protects against the dangers from sepsis. That where it fails, the failure is not due to the method itself, but either to the imperfections in its application or to the inapplicability of the system of Lister to the case, which occasionally happens. Take, for instance, an extensive lacerated wound into which innumerable particles of dirt are imbedded, beyond the reach of absolute and complete removal, and where portions of tissue are so injured that they are incapable of becoming organized. In such a case Listerism will frequently fail, but even then no harm can result from making the attempt. In two cases of compound gun-shot fracture of the femur, which I treated by Listerism, both recovered in less than six weeks with a very slight amount of suppuration and absolutely no constitutional irritation. In one of the tibia, compound and comminuted, while there was necrosis and suppuration, there was no sepsis and no rise of temperature. Did time and space permit, I could give case after case in illustration of the value of antiseptic surgery occurring within my personal observation, but I turn to the weight of greater authority. In a list of cases published in the sixth congress of German surgeons there are seventy-five compound fractures; all recovered. There were forty-two amputations of the thigh, with but one death; fifty osteotomies, with but one death, and that in a "bleeder." Schede gives thirty-seven compound fractures with one death. Dr. Weir gives forty major amputations, without a single death; also, a consecutive list of seventy compound fractures without a death; and in 150 major compound fractures, only three deaths. Contrast this with seventeen consecutive cases of compound fracture, all fatal, in a hospital where Listerism is not used.

The idea is advanced by some that while antiseptics may be necessary in hospitals, they are not needed in private practice. For the sake of argument, admit this, and as compound fractures can be better treated, as a rule, in all other respects, in a

hospital, is it not imperative that the increased dangers from sepsis should be rigidly guarded against by the invariable use of that method which experience has shown to be best for the purpose. A properly-managed hospital, with a thoroughly competent staff, is a great boon to the poorer classes; but it *can* be made a *pest* to be avoided. This, however, is leading me into a wide subject, hospital organization and management, about which I may have something to say on a future occasion.

ON THE USE OF THE ELECTRO-MAGNET IN REMOVING PARTICLES OF IRON FROM THE EYE.

BY LUCIEN HOWE, M. D.

It was one of the dreams of older ophthalmic surgeons that fragments of iron or steel, when firmly imbedded in the cornea or in the sclerotic, might be removed by means of a magnet. This appears, at first glance, so plausible, that by many it is supposed to be an easy matter, and it is not unusual for a laborer who has been thus injured to enter a physician's office expecting magic relief by some such means. Unfortunately the fragments are so small as to be attracted only slightly, even by a strong magnet; and, moreover, they are frequently imbedded so firmly in the cornea or other portion as to require considerable force to dislodge them. Until recently, therefore, the method was regarded as practically useless in every instance.

During the last five or six years, however, a number of cases have been reported, in which the magnet served a good purpose in the removal of such foreign bodies, when lodged in the vitreous humor. Easily movable as they were in this gelatinous substance, they could be directly drawn to a certain spot on the sclerotic, and then removed through an opening there made, although usually with some escape of the vitreous. If it were desirable to cite such examples, I might add to the list by detailing an operation of this kind, in which the magnet proved almost invaluable.

But my object at present is to give the outlines of two cases, one of which shows that the magnet is useful in dislodging such particles from the cornea; the other suggests an improvement in the ordinary methods of removing them from within the globe.

The first, was that of a laborer, D. K., who, when striking with a hammer on a flinty rock, suddenly felt something enter his left eye. A physician who was consulted, failed to notice any special cause for the pain of which the man complained, and, considering the injury to be a slight abrasion, dismissed him with a prescription for an astringent lotion. Some slight injection, lachrymation and pain persisted, and on the 17th of December, 1882, thirty-eight days after the accident, the patient applied to me.

I found, at that time, in addition to the symptoms mentioned, a small dark speck on the outer part of the cornea opposite the edge of the pupil. Oblique illumination revealed this to be the end of a fragment of iron which subsequent measurements showed to be about one and one-half millimetre long and one-half millimetre broad. It had evidently struck the cornea with the point foremost, and passing inward, about one-half remained in that structure, while the other half projected into the anterior chamber. The point of entrance was partly closed, thus causing comparatively little pain or irritation.

All efforts to remove the particle in the ordinary manner, by means of a needle, were painful and fruitless. On disturbing the end which was imbedded in the cornea, the other end could be seen to move in the aqueous humor. To persist in such attempts would be to run the risk of dislodging the piece and pushing it into the globe against the lens, producing cataract, or on to the iris, giving rise to severe inflammation. It would have been also dangerous to attempt to pass a knife in behind it, and push it outwards. To remove it with forceps of any kind was impossible.

There seemed to be only one solution of the difficulty, only one method which gave any hope of immediate relief. It was

to draw out the fragment by means of a magnet. Fortunately this means of assistance was at hand, in the form of the electro-magnet, described by Dr. Conrad Frolich in the *Klinische Monatsblätter für Augenheilkunde* for 1881, and manufactured by Hess, of Berlin. The eye had become so sensitive, from efforts at removal with a needle, and photophobia was so great, that it was deemed worth while to administer an anæsthetic. Having done this, the point of entry in the cornea was first enlarged, and then the pole of the electro-magnet placed over the fragment. Instantaneously it was dislodged, a spurt of aqueous following its exit, as it came out attached to the point of the instrument.

This case seems worthy of mentioning,

1st. Because of the peculiar position of the fragment and the consequent difficulties in its removal.

2d. Because the electro-magnet was useful in really *extracting* a particle of iron from the cornea—an application of that instrument which has seldom or never before been made.

The second case was that of a machinist, F. D., from Dunkirk, N. Y., who, while at work on the driving-wheel of an engine, was struck by a particle of iron on the left eye. He came under my observation on the day following the accident, December 13, 1881. At that time he suffered no pain or other inconvenience, but there was slight ciliary injection, a small wound in the upper part of the cornea could be detected, and immediately beneath this a glistening fragment, which measured, subsequently, two millimetres by three-fourths of a millimetre. This had not penetrated the lens, but simply rested with the sharp point near the edge of the iris, as was shown by the ready dilatation of the pupil when atropia was used. The question as to how it should be removed was not an easy one to answer. Any ordinary instrument, when intruded into the anterior chamber, would be apt to tip the fragment over upon the lens, thus wounding the capsule and producing cataract; or, there was danger of a similar effect by attempting an iridectomy in the usual manner. In

other words, it appeared eminently advisable, whenever the anterior chamber was punctured, that the fragment should be drawn out at once through the opening—that it should not be pressed between the posterior surface of the cornea and the anterior surface of the lens, or, at least, that the iris be kept interposed between the sharp edges of the iron and the lens, in order to protect the latter.

With a view to accomplishing this, the handle was cut off of an ordinary iridectomy knife, and the blade screwed firmly into the helix of the electro-magnet, already referred to. The patient having been etherized by his family physician, Dr. J. M. McWharf, an opening was made at the edge of the cornea, in the usual manner for performing an iridectomy. As soon as the magnetized knife approached the fragment, the latter bent over and attached itself to the point of the instrument. But unfortunately for the perfection of the operation, when the knife was withdrawn through the narrow opening the fragment of iron was scraped off, as it were, and still remained in the interior of the globe, partly hidden in the folds of the iris. Every attempt to extract the fragment alone was unsuccessful, and it was therefore necessary to draw out a large part of the iris surrounding it, and cut it off.

The wound healed readily, and the only disadvantageous effect remaining was the irregular form of the pupil, the inevitable result of the iridectomy.

The case presents three points of interest:

1st. The position of the fragment was unusual, such particles being arrested much more frequently by some resisting tunic of the eye than by the soft tissue of the iris.

2d. The use of a magnetized knife in this locality has not before been recommended, at least to my knowledge, and the good purpose which it served, up to a certain stage, shows that the suggestion is worthy of some little consideration.

3d. The fact that the particle was wiped off from the knife as the latter was being withdrawn through the edges of the wound

shows the necessity of modifying this part of all similar operations, no matter in what part of the eye the foreign body is located. In other words, it is desirable that at the moment of exit the wound be made wider to facilitate the withdrawal of the instrument with the attached fragment, as could be accomplished, for example, by dilating the wound at that instant with a pair of fine forceps.

The result obtained in this second case might be considered satisfactory, and the method of operating at least safer than that formerly employed. But reflection upon the details of the procedure shows that greater improvement might have been made. To point out these, for the benefit of other operators, seems of more practical use than simply to relate the history of a fortunate case.

DECISION OF THE SUPREME COURT OF THE STATE OF NEW YORK
ON THE QUESTION OF THE VALIDITY OF THE CHARTER
OF THE COLLEGE OF PHYSICIANS AND SURGEONS.

*The People of the State of New York, Respondents, vs. George W.
Cothran and Others, Appellants.*

Medical College—It cannot be formed under Chapter 319 of 1848, as explained by Chapter 51 of 1870—What educational institutions may be formed under these acts—Chapter 319 of 1848, providing for the incorporation of benevolent, charitable, scientific and missionary societies, as explained by the declaratory act of 1870 (Chap. 51), does not provide for or authorize the incorporation of medical colleges, to give instruction in the art of medicine and surgery for a compensation to be secured by them, and to issue and grant diplomas to graduates—Only such educational institutions can be formed under the said acts as are connected with or controlled by some Christian Church or association.

Appeal from a judgment entered upon an order of the Erie Special Term, overruling a demurrer to the complaint.

Tracy C. Becker and George Clinton for the appellants.

Hamilton Ward, Attorney-General, and A. G. Rice, for the respondents.

SMITH, P. J.:

The defendants are charged in this action with acts of usurpation, in assuming to be a body corporate, without due authority of law, and the relief asked for is that they be adjudged not to be legally incorporated, and that they be restrained from acting as a corporation. The complaint alleges that in March, 1879, the defendants assumed to be incorporated as a medical college in the city of Buffalo, under the provisions of Chapter 319 of the Laws of 1848, and of the several acts amending the same, and as such corporation to give instruction in the art of medicine and surgery, for which they demanded and received compensation, and to issue and grant diplomas to graduates, and to do all other acts pertaining to and ordinarily done by incorporated medical colleges.

The question is whether a medical college can be lawfully incorporated under the acts referred to.

The act of 1848 is entitled, "An act for the Incorporation of Benevolent, Charitable, Scientific and Missionary Societies;" and the first section of the act authorizes any five or more persons possessing the qualifications prescribed by the act to associate themselves for "benevolent, charitable, scientific or missionary purposes." If that act stood alone, a question might well be raised as to whether it was intended to authorize the formation of societies for the purpose of carrying on medical or other colleges, or any institution whatever, which is primarily and exclusively "educational," and especially one in which a compensation is demanded for the instruction furnished. An institution of the latter kind could hardly be regarded as a "benevolent," "charitable" or "missionary" institution, within the ordinary meaning of those terms. In a certain sense a medical college may be termed a "scientific" institution, as it is designed to give instruction in the science of medicine, but the idea most readily suggested by the use of the term "scientific" in the act referred to, is that the legislature intended merely to authorize individuals to associate themselves together for the purpose of mutual co-operation in scientific investigation and pursuits.

The legislature has solved the doubt, to a certain extent, by a subsequent act declaratory of the meaning of the act of 1848. We refer to Chapter 51 of the Laws of 1870. Its first section declares that the act of 1848 shall be deemed to authorize the incorporation of any society for the purpose of establishing and maintaining "any educational institution, or chapel, or place of Christian work, or any parsonage, rectory or official residence of any bishop, pastor or minister of any Christian Church or association." It is to be observed that the act of 1870 does not add to or vary the words of the act of

1848, although in its title it purports to "amend" it; but it simply declares the meaning of the earlier act, and it declares that certain educational institutions are within its scope. The defendants contend that it authorizes the establishment and maintenance of any educational institution, while it is insisted on the part of the plaintiff that it is limited to such educational institutions as are connected with or controlled by some Christian Church or association. We incline to the latter interpretation for several reasons:

First. It is a well-settled rule of the common law that all legislative grants of privilege are to be liberally interpreted in favor of the public, and as against the grantees of the monopoly, franchise or charter, to be strictly interpreted. Whatever is not unequivocally granted in such acts is taken to have been withheld. (Sedg. on Const. and Stat. Law, 338, 339, and cases there cited in note.) That rule is fully applicable to a statute authorizing the formation of an unlimited number of corporations, and especially corporations vested with powers so directly and vitally affecting the interests of the public as the licensing of persons to practice the art of medicine.

Second. The maxim *noscitur a sociis* applies. The term "educational institution" is classed in the statute with the terms "chapel," "place of Christian worship," and "parsonage, rectory or official residence of any bishop, pastor or minister of any Christian Church or association," all of which imply Church control.

Third. The uniform policy of the State, as evinced by its legislation (unless the acts of 1848 and 1870 are exceptions), has been to create medical colleges by special charter or by special act of the Board of Regents (Laws 1853, Chap. 184) prescribing various requisites, conditions and limitations looking to the increased usefulness of the institutions and to the public good. An intention to depart from that policy should not be implied from words of doubtful signification.

Fourth. Furthermore, the grant of a franchise so important to the grantees and to the public as that of forming a corporation for the establishment and maintenance of a medical college with the powers claimed by the defendants ought not to be spelled out by judicial construction of doubtful language. The presumption is that if the legislature intended to confer it they would have done so in clear and unmistakable language.

The third and fourth sections of the act of 1870, relied upon by the defendants, do not strengthen the construction which they contend for. There is nothing in those sections to indicate that they refer to any other universities or colleges than those which are under Church control.

The circumstance that the Regents of the university, in their reports, and other State officers, in their official utterances, have, from time to time, recognized the existence of medical colleges assuming to have been formed under the acts of 1848 and 1870 has but little bearing upon the question as to whether such institutions were legally created. The most that can be said is that those

officers, finding them in existence, treated them as *de facto* corporations, without assuming to pass upon the question of the validity of their organization, a matter beyond the scope of their official authority.

We think the judgment and order of the Special Term should be affirmed.

Hardin and Haight, JJ., concurred.

Judgment and order affirmed, with costs.

BACILLUS TUBERCULOSIS.*

MARY B. MOODY, M. D.

That a malady so widely disseminated and so unmanageable as the tubercular variety of phthisis pulmonalis, or what is popularly known as consumption, must, in its beginnings, be microscopic in character, has for years been suspected by students of medicine. That the patient and persistent labors of one individual, Dr. Robert Koch, should at last have revealed it, may be almost, but is not quite, beyond belief. The fullness of time for such a discovery had been indicated by the great amount of research, in regard to both the pathology and the etiology of the disease. The revelations of Davaine's and Pasteur's studies of anthrax and of Klebs' and Tommassi-Crudelli's of malarial disorders, were brilliant and suggestive. Doubtless, the discovery and investigation of bacillus anthracis and of bacillus malaria, led to the discovery of bacillus tuberculosis.

Botanically, the bacilli belong to the lowest known orders of the vegetable kingdom. Their possession of cellulose determines this point. Many of the earlier observers of bacteria, were, for a long time, in doubt with regard to their classification. They were believed to be the lowest of animal organizations. Their classification in the vegetable kingdom has been decided by the absence of chlorophyll. They are not algae but fungi, belonging to division sixth and last *Schizomycetes*. What may be beyond them, we have now no means of knowing. It seems the border-land of botanical science. But the conviction is borne in upon any who study by aid of optical

*Buffalo Microscopical Club, Dec. 12th, 1882.

instruments, that there is no such thing as empty space, and that cause and effect are not infinitely removed from one another, even though causes may for a long time elude many and careful searches for them, and physicians are still obliged, many times, to confess their ignorance with regard to the causation of disease.

The pearly or gray granulation of miliary tuberculosis, was first described by Mangetus in 1700. A century passed. The year 1800 came and went, and no recorded advance had been made in the knowledge of this small, but almost certain signal of disease and death. The nineteenth century, however, was to be one marked by progress in this, as well as many other directions. In 1809, Bayle described tubercular phthisis. Laennec, in 1819, ten years later, wrote more fully and clearly concerning the morbid phenomena, but overlooked the inflammatory condition. Louis confirmed his observations in these remarkable words: "Nos observations confirment celles de M. Laennec, et que, pour nous, comme pour lui, l'existence des tubercules dans les poumons est la cause, et constitue le caractère propre de la phthisie." This opinion was formed by Laennec and endorsed by Louis without the aid of the microscope. Rokitansky also accepted Laennec's views, and added an observation, the occurrence of multinucleated corpuscles. Thirty years later, in 1849, Loebert, bringing the microscope to bear upon the subject, gave his testimony in favor of the observations and opinions of Laennec and Louis. Not until 1860, did Rheinhardt demonstrate the fact, that tubercle, undergoing cheesy transformation, means inflammation. Virchow endorsed Rheinhardt's discovery, and declared that tubercle might originate from inspissated pus, or *parasites*. Niemeyer now undertook to connect phthisis with pneumonia, but failed. Waldenberg, in 1867, announced that he had succeeded in producing tuberculosis, by inoculation with aniline dyes, boiled tissues and other substances, inert as poisons; apparently confirming the same, by numerous experiments. Villemin, the next year, 1868, inoculated animals with

the caseous matter of human phthisis, and produced well marked tuberculosis of internal organs. Discussions, which now arose, led to a more careful histological study of tubercle. A constant pathological element was wanting. Adenoid tissue, giant cells, epithelioid corpuscles, and central caseation were each sometimes present, sometimes absent. Fox and Burdon-Sanderson attributed the disease to the presence of a mechanical irritant. Gerlach, of Berlin, in 1870, as the result of many experiments, declared that non-tubercular matter will not produce tubercle. Orth, in 1873, produced the disease, by feeding tuberculous matter to rabbits. Schnepfel was convinced by this of the specific nature of tubercle, and openly advocated it. Buhl, of Munich, in 1874, scarcely eight years before the discovery of Koch's bacillus, showed that tubercles might take their rise in the body, from centres of infection in it, cheesy foci. Schottelius, in 1878, insisted that phthisical granulations may be mistaken for minute capillary pneumonias, or occluded bronchioles. In 1879, Tappenier found that subjecting dogs to the forced inhalation of an atmosphere laden with phthisical sputum, in a state of minute division, was productive of miliary tuberculosis in them, in every instance. The inhalation was continued from twenty-five to fifty-one days. Schottelius varied the experiment by using finely powdered Limburger cheese, powdered brain, bronchitic sputum, &c., with the same result. Wargunin, in April last, published a record of experiments similar to those of Schottelius, and with similar results. Weichselbaum reports, in April or May of this year, that, as a result of eleven experiments upon dogs, infection followed in them after a single inhalation of tuberculous sputum. Baumgarten, in the further support of the assertion of the specific nature of tubercle, inoculated the anterior chamber of the eye with a few drops of blood from a tubercular animal, and a crop of miliary tubercles was produced in a few weeks. Long ago confusion in the creeds had come. What the ultimate effect of these later discoveries will be in controlling or overcoming the disease, can scarcely, yet, with safety be predicted.

In 1875, the Buffalo General Hospital contained a number of cases of well marked phthisis, as it generally does. The histories were diverse. One had a supposed syphilitic cause. Another, a Swiss, was said to have become a victim to the disease, from change of climate. Another young man had been employed about the railroad station, lifting heavy weights, and had been exposed to sudden changes of temperature, getting heated about his work and cooling suddenly. For another case no cause could be assigned. The patient gained in weight very decidedly, upon cod liver oil and a nutritious diet, but died from phthisis, a few months later. The study of these, and many other cases, with their family histories, led me long ago to doubt the *necessary* heredity of phthisis, except in children born during the time of active development of the disease in the mother. Yet there seems to be, what may properly be called, family predisposition to it. There was also very little in these studies to show the *true cause*, or to suggest a successful treatment of tuberculosis. The developments of the last year, however, throw much light upon an otherwise incomprehensible malady. By histological and pathological research, it was several years ago proven, that the site of infection in the lungs may be variable. The infiltration of tubercle may originate in the wall of a pulmonary vessel, a bronchiole, or a larger bronchial branch, an infundibulum, or alveolus, and in other organs and tissues besides the lungs.

On the 24th of March last, Dr. Robert Koch, formerly of Breslau, now of Berlin, read a paper upon the "Etiology of Tubercle," before the Physiological Society of Berlin, which has been the subject of much comment, by scientific bodies, and the medical and scientific press. This paper may be found in full in the *Berliner Klinische Wochenschrift*, 1882, No. XV, and a resume of it, by Prof. John Tyndall, in the Quarterly Epitome of American Practical Medicine and Surgery, collateral to *Braithwaite's Retrospect*, Vol. 3, No. III. Dr. Koch has established the fact of the presence of the parasitic plant, called bacillus

tuberculosis, in phthical diseases, and proved that the parasite will produce the disease in animals when inoculated.

The proof lies in conclusive culture experiments, extending over as many as ninety days; the animals being inoculated with the last, and presumably purified growth of the bacillus. The plant is white in color, and propagates itself by spores, and not by division. Sporadic propagation is slower than that by division. The perpetuation of the disease is facilitated by the tenacity of life, possessed by the spores. They resist heat and cold, moisture and dryness, and many disinfectants. M. de Korab finds helenine destructive to this bacillus, when out of the body; some other substances have also been found to possess this property. *Bacillus tuberculosis* is in length equal to one-half to one diameter of a red blood corpuscle, or $\frac{1}{8400}$, to $\frac{1}{3200}$ of an inch. Its width is one-fifth as much. Its spores are arranged at regular intervals. It may be, and probably is, possessed of cilia, which can not be easily shown by any instrument now in use. Cilia have been observed, after so long as five hours consecutive watching for them, in other varieties of bacilli.

There is no longer good room for doubt that a parasitic disease exists, bearing the characteristics of that commonly known and recognized as miliary tuberculosis, communicable, inoculable, and therefore not *necessarily* hereditary. All such diseases are contracted by some persons much more easily than others, and by some families, than others, without amounting to hereditary predisposition. It is estimated that tubercular diseases occasions one-seventh of all deaths of the human race, and one-third of all who die in active middle life. There is as yet no known specific for it.

The minimum of temperature at which the tubercle bacillus can develop and multiply, is 86° F., and the maximum, 104°. Unlike the bacillus anthracis, that of splenic fever, which can flourish freely outside the body in the temperate zone, animal warmth is necessary to the propagation of this newly discovered organism. The spores, however, retain their vitality for a long

time without regard to temperature. Change to a favorable locality is all that is necessary to their development.

In a vast number of cases, Koch has examined the matter expectorated from the lungs of persons affected by phthisis, and found in it multitudes of bacilli, while in matter expectorated from the lungs of those not so affected, he has never found it. The expectorated matter in the former cases, was highly infective, nor did drying destroy its virulence. Guinea pigs, infected with matter which had been kept dry for two, four, and eight months, respectively, were smitten with tuberculosis, quite as virulent as that produced by fresh expectoration. The temperature at which it had been kept was not mentioned. Inhalations of dust, containing dried tuberculous matter, are as common as they are dangerous. It is no wonder that the proportion of our death rate is so largely from this single disease.

Prof. R. C. Kedzie, in his annual address as President of the American Public Health Association, Indianapolis, Oct. 17th, made the statement that "It has come to be the belief of scientific and thoughtful men, that preventable sickness, unprevented, is a crime against society, and that preventable death, unprevented, is a crime against God."

Public Health Associations, in this and other countries, are laboring often with almost unlimited means at their command to find the very truth of such matters. There is every precaution taken against mistakes and the deceptions of science. Practical questions are to be solved, and it matters little in what way the solution falls, provided it be a correct one. There are no theories to uphold, no old pledges to theories to redeem, but the utmost freedom, thoroughness and exactness of research. It was under such circumstances that bacillus tuberculosis was detected and is being farther studied.

It is curious to note the growth of an idea, or the steps that lead to a discovery. The first observer of any of these minute organisms, of whom we have any knowledge, was Leuwenhoeck, the so-called father of microscopy. This occurred in 1675. He

was astonished, but sufficiently confident of what he saw, to give the description of a number of these forms to the world by publication, describing bacteria and vibrios, so that without his being able to name them with these names, they are now recognized as having been observed by him from his description.

We have no other record of work upon them, except that done by Leuwenhoeck, until a hundred years, lacking two, had passed. In 1773, O. J. Müller endeavored to classify them, making them a group of infusoria, under the name *infusoria crassin-cula*, establishing two genera, *monas* and *vibrio*. More than fifty papers, considered worthy of publication and preservation, had been written before M. Davaine, in 1859, clearly pointed out that the vibrionens are vegetables. Ehrenberg classed them as animals, so also did Dujardin. Robin pointed out resemblances between bacteria, vibrios and leptothrix. M. Davaine, in 1859, clearly demonstrated that the vibrionens are vegetables, dividing the genus *vibrio* into eleven species, *lineola*, *tremulans*, *ingula*, *prolifer*, *serpens*, *bacillus*, *synxanthus* and *syncyanus*, lactic, butyric and tartaric right. The attention of chemists and pathologists was called to them, and to the entire family of Bacteria, by the researches and discoveries of Davaine, Pasteur and Hallier, concerning their nature and importance. Discussions waxed warm and somewhat warlike. M. Hoffman, in 1869, ten years after the publication of Davaine's memoir, demonstrated: "First, that the bacteria are plants, having a very distinct cellular organization; second, that they can only be classified in accordance with their form and size." M. Cohn, who has spent much time with the bacteria, considers them as belonging to the algae, group schizospores. He notices the absence of chlorophyll. Other botanists consider this characteristic decisive and class them as fungi. It is Nageli who gave them the name of Schizomycetes. In 1876 Cohn and Koch both published important papers, one upon the influence of temperature upon bacteria, their origin and the formation of spores in the bacillus of hay infusion, and in that of charbon, the other being researches upon the bacterium of charbon.

From the publication of Davaine's paper in 1859 up to the year 1880, more than nine times as many publications of papers, &c., upon this subject had been issued than had appeared altogether before that time. It has been a period of great research among these obscure organisms and of great discoveries. Many difficulties have been encountered and overcome. The latest discovery, bacillus tuberculosis is not by any means the least. From a sanitary point of view, it is of the highest importance. It is not necessary at present to prove that there is no other form of phthisis pulmonalis than that produced by this parasitic plant. Sputum, if only suspected, should be disinfected, or, if that prove impossible, taken care of so as to prevent harm. Tuberculous people should themselves take care not to communicate their malady to others. Animals do not need any especial hereditary influence other than that of being animals in order to contract it. It is as well to assume that man does not until the contrary is proven. Inhalations of non-specific dust may, or may not, produce fatal lung affections. It is believed that they do. They can certainly produce irritation, and it is upon a raw or irritated surface that the bacillus is able to find a good foothold.

The examination of the sputum of one hundred and twenty consumptive persons, for bacillus of tubercle, was made during the months of May, June, July and August, last, by Dr. Balmer and Prof. Dr. Fraentzel, and the result published in the *Berliner Klinische Wochenschrift*, Nov. 6. They have arrived at the following conclusions:

1. "The prognosis of a case of tuberculosis may be determined with certainty from the number and degree of development of the tubercle bacilli found in the sputum. All cases, with numerous well developed bacilli, give a bad prognosis. It is bettered in the same proportion that the bacilli decrease. In all cases, which are progressing rapidly, the number of bacilli is monstrous.

2. "The number of tubercle bacilli is by no means constant during the course of tuberculosis; it becomes greater as the breaking down process of the lungs goes on and reaches its maximum at the end of life."

3. "The distribution of the bacilli is not the same in all patients; sometimes they are equally distributed, sometimes they are found in groups.

4. "Their degree of development is also very diverse; in many cases they appear small, scanty and not universally spore-bearing. In these cases their number is always limited.

5. "Such bacilli are found in patients in whom the disease is progressing very slowly, or is stationary, so especially in old caverns closed up by still healthy lung tissue.

6. "In all acute cases of tuberculosis in which the more intense symptoms of the disease are present, such as fever, night-sweats, &c., the bacilli were much larger, and the spore formation in the same clear and indisputable.

7. "Especially were all cases where many bacilli were found accompanied by fever (infection fever). If the fever was lacking, the bacilli were very few and poorly developed.

8. "Very noticeable was the difference between the quantity of bacilli in the sputum from fresh cavities, and that present in the cavern walls themselves. If enormous quantities were found in the former, they would appear in the latter only sparingly.

9. "The sputum appears, therefore, to be a more favorable place of nourishment for the bacilli, than the still living lung tissue.

10. "It can not be asserted that the ingress of oxygen to the cavities of the lungs is the cause of the development of the bacilli, for we found them in just as great numbers in the pus exudation from the closed knee-joint, in the tuberculous inflammation of the joint.

"The evidence of bacilli was present, not only in sputum and in the walls of lung cavities, but also in the tissue, and in the abscess secretion, in tubercular abscess of the lungs, in the wall of intestinal abscess, and in the pus of tuberculous knee-joint inflammation.

"The discovery of bacillus tuberculosis is not alone of use in differential diagnosis of lung diseases, but also in abscesses, inflammation of the joints, &c., is of importance.

"In conclusion, it should be explained, in order to show the difficulty of disinfection of tuberculous sputa, that in sputa almost entirely dissolved by strong potash solution, the coloring of the bacilli is still very clearly present.

"We made the same test also, in the edge layers of sputa, which had lain twenty-four hours in a sublimate solution 1:1,000."

Balmer and Fraenzel used a modification of Ehrlich's modification of Koch's method of examination of sputum lung tissue, &c., for bacillus. Koch's method of examination is as follows:

The tuberculous substance was either spread out upon a cover glass, dried and exposed to heat, or a piece of a tuberculous organ was placed in alcohol, and afterward cut into fine pieces. A particular solution of methylene blue was made, a weak solution of potash being added. The cover glass, covered with tuberculous matter, (or a section of the organ) was then placed in the coloring solution for twenty to twenty-four hours. 200 ccm. of distilled water, were mixed with 1 ccm. of a concentrated alcoholic solution of methylene blue, shaken, and again shaken, after addition 0.2 ccm. of a 10 per cent. caustic potash solution. One half to one hour sufficed, if the solution were warmed in a water bath up to 72° F.

The cover glass, which comes out a deep blue, is then treated with a concentrated and filtered watery solution of vesuvin for one or two minutes, and is afterward washed with distilled water. The blue of the methylene has visibly changed to brown; under the microscope all the amorphous detritus and fragments of tissue, spread out on the glass, are brown, but the tubercle bacteria remain blue. *Bacillus tuberculosis*, and *bacillus leprosus*, are the only bacteria which possess the power of resisting the staining of vesuvin. *Bacillus leprosus* will take on a certain other coloring, which does not affect *bacillus tuberculosis*.

Ehrlich's method differs. By means of a dissecting needle, a particle of expectorated matter, about the size of a pin's head, is taken up and spread between two cover glasses, in two exceedingly thin layers. The cover glasses are then separated by sliding one on the other, and left to dry, protected from the dust. After a few minutes, they are dry, and the fixing of the albuminoids and mucin, is proceeded with. For this, they can be warmed for an hour, at 100° or 120° C. or, which is simpler, rapidly passed four or five times through the flame of a spirit lamp. To color the preparations, a saturated solution of aniline is to be made in distilled water, by shaking with the water the excess of aniline, which floats on it, and carefully filtering the whole. To the transparent liquid thus obtained, add, drop by drop, a saturated alcoholic solution of fuchsine, or methyl violet, until a slight opalescence is produced. The preparation should not be immersed in the bath, but be placed in such a manner as to float on it, and to have the surface which is covered with the tuberculous matter in contact with the liquid. After a quarter, to a half an hour, the staining is complete. If examined in this condition, it is seen that the preparation is of such an intense color, that it is impossible to distinguish its elements, and it is decolorized by means of a strong acid. Colorless salts of aniline are thus formed, which are very soluble in water, and disappear by washing with distilled water. The bacteria, not being penetrated by the acids, preserve their color. In order to secure that they alone shall be colored, therefore, it is only necessary to immerse the cover glasses in nitric acid, diluted with twice its volume of water. Nitrous vapors are at once disengaged, and the preparation becomes colorless in a few seconds. The bacilli are red or violet.

Dr. F. Van Ermengen, referring to Koch's method, and Ehrlich's modification of it, describes some additions of his own, which he claims make it absolutely sure in its results. Instead of making a solution of the aniline in water, which only takes up one part in thirty, an alcoholic solution is made,

four grammes of liquid aniline, in twenty grammes of alcohol, at 40°, adding an equal quantity of distilled water, and filtering before use. The most stable coloring agents, the author finds to be sulphate of rosaniline and methyl violet B B B B B. The preparations after having been decolorized by dilute nitric acid, are well washed in distilled water. Baumgarten recommends still another method, as simple, and more expeditious than any other. After having spread the tuberculous matter on the cover glass, it is placed in a watch glass and covered with distilled water, to which is added some drops of a 33 per cent. solution of caustic potash. Without any farther preparation, the bacteria may then be recognized under a power of 400–500 diameters, particularly if a light pressure be applied to the cover glasses so as to disengage the bacteria more completely from the detritus which surrounds them. To distinguish them more clearly from the other bacteria, the cover glass may be dried by passing it rapidly two or three times through a flame, and then staining by a concentrated aqueous solution of aniline violet, or other color. The bacteria of tuberculosis are absolutely colorless, while the other bacteria, micrococci, &c., are plainly colored. The whole process only takes ten minutes.

The method practiced by Dr. Osler, of Montreal, is, after drying on the cover glass in the usual manner, to treat with caustic potash, then flow the cover with a solution of aniline violet. •

Drs. Balmer and Fraenzel, in the examination of 120 cases, before mentioned, used Koch's and Ehrlich's methods, with modifications.

They say, "We take a quantity of the sputum, the size of a hemp seed, out of the thick, slimy, purulent mass, with a pair of clean pincers, and without any special selection, place it between two cover glasses, from 0.10 to 0.12 m m thickness, press the cover glasses strongly together, and dry the little sticky particles of sputum, passing one after the other slowly three times through the flame of a Bunsen burner. These cover glasses, for

coloring the bacilli, are now laid, swimming upon the coloring solution, and left in the same about twenty-four hours.

"As coloring material it is necessary that we take either gentian violet or fuchsin. From these colors will a solution of 1.0 grm. in 50 grm. aniline water, if possible, be freshly prepared and filtered before using. By aniline water we understand distilled water, to which aniline in excess is added, well shaken together and then the whole carefully filtered. This filtrate we call aniline water. After the cover glasses have lain in the coloring solution as nearly as possible twenty-four hours, the now colored preparations will be taken out with a pair of pincers, washed in distilled water and then for one-half to one minute be laid in dilute nitric acid, (one part pure acid to three of distilled water). In this way must the sticky fragments of the sputum become fully discolored. For this the same time is not always necessary; if the preparation happens to be too thick it must remain longer in the acid until it is discolored. When the preparations are taken out of the acid, they are again washed in distilled water and then laid in another color solution to get the ground color. For those which were in the gentian violet solution, blue colored bacilli, a solution of Bismarck brown; for those in the fuchsine solution, red colored, a solution of methylene blue. These as ground colors need fluidity and are simply concentrated, watery solutions of the color filtered before use. The preparations remain in the ground coloring one-half to one minute, are washed in distilled water and dried between sheets of blotting paper. If they are not soon dry, they can be passed once or twice through the flame of a Bunsen burner. The dry cover glasses will then be laid in a drop of Canada balsam."

Dr. Schmidt, President of the Pathological Society of New Orleans, claims that Koch's bacilli are fatty crystals, because something that he finds and calls by this name dissolves in boiling ether.

At present burning would seem to be the best and only safe method of disposing of sputa of consumptives.

In the *British Medical Journal*, Mr. H. Osborn Bayfield, says that workmen engaged in tinning, where palm oil is used for a flux, inhale the volatilized oil and grow fat. Those previously emaciated or weak rapidly improve, and he suggests a trial of it in phthisis.

The value of certain antiseptic inhalations in most diseases of the respiratory organs has long been established.

The value of a dry pure atmosphere, as a preventive of tuberculosis, was established by Dr. Bowditch nearly twenty years ago. The results of his investigations on the subject were published in the *Atlantic Monthly* as a matter of general public interest. It is precisely the kind of atmosphere in which fungi do not flourish that is least suited to the development of phthisis. In rabbits, the artificial disease has been cured by the inhalation of creosote.

In an early arrest of the disease lies at present the greatest and almost only hope of recovery, although exceptions to this rule are occasionally placed upon record.

Examination of sputa from consumptives now in our Buffalo hospitals by different physicians has revealed the parasite in great numbers. A good one-fifth glass will show their presence, but one-twelfth is more satisfactory.

To a paper in the *Record* of Oct. 28, by Dr. T. E. Satterthwaite, "Bacteria, Magnin," *Journal of the Microscopical Society*, *Braithwaite's Retrospect* and other trustworthy sources I am indebted for many of the facts here collated.

Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Regular Meeting, February 6th, 1883.

President, Dr. A. R. Davidson, in the Chair. Dr. C. M. Daniels, Secretary.

Present—Drs. Barrett, Coakley, Fowler, Heath, Warren, Brecht, Runner, Moody, Cronyn, Granger, Hubbell, Kamerling, Bartlett, Burghardt, Keene, and by invitation, Dr. Hayd and Mr. F. R. Campbell.

Applications for membership were received from Drs. G. W. York and Jacob Frank, who were duly elected.

Dr. Granger read a paper entitled "Paresis."

Discussion—Dr. Cronyn said Dr. Granger had most elaborately dealt with his subject, the disease itself being one in which the individual always imagines himself pleasantly situated, having great wealth and offering to divide with those encouraging his numerous fancies; related a case which appeared very suddenly, following an epileptiform convulsion, hemiplegia being present which was partially recovered from; thought that alcoholism sometimes simulated it very closely.

Dr. Bartlett had seen but few cases, but believed that the longer insanity was studied the more structural changes would be found; related a case where a prominent man, afflicted with "paresis" in early stages, came to him and said people accused him of being drunk. Speaking of the exalted idea so generally noticed, he had thought that perhaps the undue mental effort in the development of grand schemes, &c., might tend to produce "paresis" itself.

Dr. Hubbell wished to acknowledge the interest he had taken in the paper, especially as he had a typical case now under his care, which was passing through the various stages as cited by the essayist; thought treatment was only palliative; had used strychnia, faradization, &c.

Dr. Heath thought the paper the most interesting he had heard on the subject. Referring to the possible syphilitic origin of "paresis," he thought that much was attributed to syphilis unjustly; thought in "paresis" it was hard to determine which comes first, the mental or physical troubles, and that it compared intimately with sclerosis of the cord.

Dr. Granger in closing said that, regarding sclerosis, he thought that it was frequently associated also that the condition was not true paralysis, but a want of co-ordination as the disease progresses. True paralysis may follow; post-mortem clots have been found upon the brain.

Dr. Barrett asked if Dr. Granger had discovered any pathological changes.

Dr. Granger replied that the differences were wide in various conditions.

Dr. Heath asked if it was, strictly speaking, a disease by itself.

Dr. Granger replied that it was now so considered.

Dr. Hayd asked if the skin or tendon reflex showed any increase of irritability.

Dr. Granger thought that tendon reflex was of no diagnostic importance.

Dr. Cronyn said that it was only of value when the cord had become engaged.

Dr. Granger remarked that the cord was involved more frequently than was formerly supposed.

Dr. Hubbel asked that the essayist would recommend as to treatment.

Dr. Granger said the cases were incurable; that treatment was of little value and only to prolong life, which certainly seemed undesirable, as in the last stages the patients are reduced to the most pitiable conditions.

Voluntary Communications—Dr. Bartlett made a few remarks and presented a specimen of a placenta, where patient had passed through nine confinements normally; then the tenth, eleventh and twelfth children were all born dead; hemorrhage

severe ; comatose condition followed. The placenta shown was from the twelfth confinement and presented a peculiarly condensed, pale condition. It was carefully examined by members of the association.

Dr. Cronyn thought the abnormalities were not so great as it was at first supposed, and that the death of the children might have been from other causes.

Dr. Bartlett replied that to him it seemed a matter of a good deal of importance, and that he knew of a case where twelve children were all born dead, and in his own experience where four were dead and another lived but a short time.

Dr. Cronyn, in replying to Dr. Bartlett, related a case where he was called to see a lady having acute bronchitis, was seven months pregnant, in four or five days, gave premature birth to a boy ; had previously given birth to six girls. Within the last ten days he had been called to see her, and found she had pneumonia and was again pregnant and premature birth of a boy again followed. He asked Dr. Bartlett why should this occur to a patient having an acute affection of the lungs and both children be boys.

Dr. Bartlett said the comparison was hardly fair, as the full quota of boys was not yet reported.

Prevailing Diseases—Dr. Cronyn had noted a great deal of follicular tonsillitis and diphtheria. Dr. Bartlett had a similar report and added "some scarlatina."

Adjourned.

CLAYTON M. DANIELS, *Secretary*.

BUFFALO MEDICAL LIBRARY ASSOCIATION.

Meeting of Directors.

OFFICE OF DR. GEO. N. BURWELL,
No. 130 Pearl St., Jan. 13, 1883.

Dr. George N. Burwell, President of the Association, in the Chair.

All the members of the Board were present.

Minutes of former meetings were read and approved.

The committee on by-laws submitted a report, which was adopted.

In conformity with the by-laws, adopted by the Board, the trustees drew lots for their respective terms of office. Doctors Lothrop and Granger drew one year, terms of office to expire at the annual meeting of the Association, to be held in December, 1883, or until their successors are elected.

Doctors Hopkins and Howe drew two years, terms of office to expire at the annual meeting of the Association, to be held in December, 1884, or until their successors are elected.

The committee on location of library submitted a report.

On motion of Dr. Hopkins, the President of the Board was authorized to make a contract with Dr. J. B. Samo, for the location for the Library, in accordance with the following proposition submitted to the Board by Dr. Samo.

BUFFALO, N. Y., Jan. 13, 1883.

I will give my front parlor, carpeted, for the use of the Library Association, with halls and stairs carpeted,—and keep the same in order—furnish a good walnut extension table for the use of the Library, at least until such time as the Association is in funds to buy it or to procure a better one—will also, if desired, place my own medical books, magazines and shelves in the room, and furnish fuel and gas for seventeen (\$17.00) dollars per month.

Also in addition to the above for the sum of two hundred and fifty (\$250.00) dollars per year I will take charge of the Bureau of Nurses whenever the same shall be established by the Association.

J. B. SAMO.

In accordance with Article VI, Section 1 of the By-Laws, the President appointed the following standing committees.

Journals—Drs. Mann, Granger and Howe.

Books—Drs. Hauenstein, Mann and Hopkins.

On motion of Dr. Mann, one hundred dollars was appropriated for the use of the Committee on Journals.

On Motion of Dr. Granger, the President appointed Drs. Mann, Hopkins and Abbott a committee to take into consideration the advisability of organizing a Bureau of Nurses to be under the auspices of the Library Association.

Adjourned subject to the call of the President.

A. H. BRIGGS, *Secretary.*

CONSTITUTION OF THE BUFFALO MEDICAL LIBRARY ASSOCIATION.

ARTICLE I.

Name.

This Association shall be called the BUFFALO MEDICAL LIBRARY ASSOCIATION of the City of Buffalo.

ARTICLE II.

Objects.

The objects of this Association are to facilitate access to current medical literature; to provide for ready reference a library of medical journals, books and monographs; to provide for social intercourse among members of the medical profession, and thus to contribute to the advancement of knowledge in medicine and the collateral sciences.

ARTICLE III.

Members.

This Association shall consist of active and subscribing members.

ARTICLE IV.

Officers.

The officers of this Association shall be a President, Vice-President, Secretary, Treasurer, Librarian and four Trustees.

ARTICLE V.

Board of Directors.

The President, Vice-President, Secretary, Treasurer, Librarian and Trustees shall form a Board of Directors, with full power to appropriate funds, enact by-laws, and conduct the affairs of the Association.

ARTICLE VI.

Amendment of Constitution.

There shall be no alteration in this Constitution unless, the same shall have been proposed to and recommended by the Board of Directors, at a meeting previous to the annual meeting, and afterwards by two-thirds of the members of the Association present at the annual meeting.

BY-LAWS BUFFALO MEDICAL LIBRARY ASSOCIATION.

ARTICLE I.

Regular Members.

SEC. 1. Any member of ERIE COUNTY MEDICAL SOCIETY may, upon approval of the Board of Directors, and by signing the Constitution and By-Laws, and paying his annual dues, become an active member of the Association.

§ 2. The representatives of the United States Army or Navy and Marine Hospital Service, stationed at Buffalo, may become active members under the same conditions as those contained in Section 1 of this Article.

§ 3. Any person may, on approval of the Board of Directors, and on the payment of *three dollars* (\$3.00), become a subscribing member and have the use of the reading room; but subscribing members shall not have the privilege of taking out books or journals, or of holding office or voting at the meetings of the Association.

§ 4. The annual dues of the Association shall be five dollars (\$5.00), payable in advance. They shall date from January 1st, and the dues of new members, joining at other times of the year, shall be at the rate of forty-two cents monthly, up to the first of January next ensuing.

§ 5. Any active member may commute his dues by the payment of one hundred dollars (\$100.00) at one time, for which he shall receive a certificate of life membership, signed by the President and Secretary. Such payment shall exempt him from the payment of any further dues to the Association. All moneys received for life membership shall be invested in a manner approved by the Board of Directors and shall be known as the *Permanent Fund*, and the interest only of such fund shall be used for current expenses of the Association.

§ 6. If any member shall fail to pay his annual dues, within one month after due notice is personally served from the Board of Directors, he shall be liable to forfeit his membership on vote of the Board of Directors.

§ 7. Members whose dues are six months in arrears, shall not be qualified to vote or hold office.

§ 8. Members shall be considered liable for dues until a formal resignation is received and accepted by the Board of Directors. No resignation shall be accepted until the member's dues are paid to date or unless specially remitted by the Board.

ARTICLE II.

Officers.

SEC. 1. The President shall preside at the meetings of the Association and shall be *ex-officio* President of the Board of Directors.

§ 2. The President, at the request of the Board of Directors, or at the request of five members of the Association, stating the reason therefor, shall call a meeting of the members of the Association for the transaction of special business, sufficient notice thereof having been served personally upon all members of the Association.

§ 3. The Vice-President shall in the absence of the President perform all the duties of his office.

§ 4. The Secretary shall keep an accurate record of all transactions of the Association and of the Board of Directors.

§ 5. The Treasurer shall receive all dues and donations of money, pay all drafts on him when signed by the Secretary and countersigned by the President, and keep a regular account of the financial concerns of the Association, an abstract of which, accompanied by satisfactory vouchers, he shall exhibit at each annual meeting.

§ 6. The Librarian shall have charge of all publications belonging to the Association and of all other property belonging to it not in the hands of other persons. He shall have the management of the library and reading-room, furnish a report of the condition of the library at the annual meeting and shall also be *ex-officio* Corresponding Secretary of the Association.

§ 7. The Trustees shall be divided by lot into two classes of two each, who shall hold office as follows, viz.: The first class for one year and the second class for two years. One class shall be regularly elected at the annual meeting the Association, in December of each year, to hold office for two years.

ARTICLE III.

Meetings.

SEC. 1. The Board of Directors shall meet on the third Tuesdays of May, November and December, and at other times at the call of the President.

Notices of a meeting shall be issued by the Secretary at least two days prior to such meeting. Five members shall constitute a quorum. At the December meeting the standing committees for the year shall be appointed, and the amount determined for the Committee on Journals and the Committee on Books to expend during the ensuing year.

§ 2. There shall be an annual meeting of the Association on the first Friday in December, when an election of officers for the ensuing year shall be held by ballot: the reports of the Board of Directors, Treasurer and Librarian read, and such other business be transacted as may be presented.

Twelve members shall constitute a quorum.

§ 3. The President shall at the November meeting of the Board of Directors appoint an Auditing Committee of three members of the Association, not members of the Board of Directors, to examine the accounts and vouchers of

the Treasurer and submit a report on the same at the annual meeting of the Association.

§ 4. In case of any vacancy occurring in the Board of Directors by death, resignation or removal, the Board shall have power to fill such vacancies.

§ 5. At least three days previous to the annual meeting notice of the same shall be issued to every member.

ARTICLE IV.

Library.

SEC. I. The Board of Directors shall have power to make proper provisions and regulations for the preservation, management and direction of the library and reading-room, and for the purchase of all books and periodicals.

§ 2. A committee of two shall be appointed by the Board of Directors, at its November meeting, to examine the books and papers of the Association, and report thereon at the annual meeting.

ARTICLE V.

Committees.

SEC. I. The standing committees shall consist of a Committee on Books and a Committee on Journals; each committee to consist of three members of the Board of Directors. The Librarian of the Association shall be, *ex-officio*, one of the members of each committee.

ARTICLE VI.

Amendments.

SEC. I. These by-laws may be amended by a two-thirds vote at any regular meeting of the Board of Directors, notice in writing having been given at a previous meeting.

Editorial.

THE STATE BOARD OF MEDICAL EXAMINERS.

The meeting of the New York State Medical Society, which held its annual session at Albany, last month, was for many reasons the most important, as it was the most interesting of any in the history of that society. We affirm this, not having in view the thoroughly scientific and scholarly papers which were presented, and the clear and able discussion which they called forth, as much as the action of the society, after an ani-

mated debate, on the ethical and educational questions which occupied so much of the time and attention of the delegates.

There was an unusual interest in the general business of the session as was apparent in the large attendance of delegates and members, while the unlooked for result of the discussion upon the question of the New Code, which was adopted a year ago and reaffirmed at this session, after a very exciting debate, marks an epoch in the history of the medical profession in this State, which claims our serious consideration.

As widespread as has been the interest excited by the State Society on the position it assumed a year ago on the subject of Medical Ethics, in our opinion, the most vital question presented for the consideration of the society, was the recommendation of a bill for the creation of a State Board of Examiners. The proposed bill came before the society in the report of the committee on legislation, and was evidently prepared with great care. Its sets forth :

- 1st. What it means to be a practicing physician in this State.
- 2d. That after some future time (Dec. 1883) a person shall not have the right to practice medicine in this State unless licensed by the State Board of Examiners.
- 3d. That candidates for license to practice medicine may select to be examined in any of the schools of practice represented by the incorporated State medical societies.
- 4th. That the records of the examinations, upon which licenses are granted, shall remain a part of the archives of the University of the State.
- 5th. It repeals all acts or parts of acts authorizing medical colleges or other corporations to grant degrees which shall be licenses to practice medicine.

There can be no question in the minds of disinterested persons as to the absolute necessity of the enactment of a law which embodies such important principles as is set forth in this bill. We are happy to give the matter our most unqualified approval and support. Our readers will recall the position we

have heretofore taken upon the subject of medical education, and the JOURNAL is more emphatic than ever in its advocacy of measures which will repair the lamentable weakness of our present system by placing the authority to grant diplomas and licenses in the hands of a Board, composed of the ablest representatives of the profession, who have no interest, direct or indirect, in bestowing what should be a coveted honor, except the the honorable ambition to elevate and improve the science of medicine through a wise choice of its votaries.

The fatal weakness of the present system of granting diplomas, which are really licenses to practice medicine, is its relation with the individual and pecuniary interests of those upon whom this authority now rests. Private corporations have no business with such responsibilities. It should be the prerogative of medical schools to teach and instruct only, and their chief ambition and aim should be to present thoroughly qualified candidates for the degree of Doctor of Medicine, to such an independent Board as the bill contemplates, which shall sit in judgment upon their work.

It would be idle to deny that from the day of the establishment of the first medical college until the present time there has been a widespread distrust among the profession of the methods and principles upon which they have been conducted. It is impossible to separate the individual, however high and noble may be the aims of such an one, from the work in which he may be engaged, especially if such a work adds to his private gains or to his professional reputation. As long as the educating power and the authority to license are vested in the same body this distrust will prevail and abuses will creep in. This bill proposes to separate them, and to endow a body entirely disconnected with the schools, with the power to sit in judgment on their labors. Can any fail to foresee the outcome of this important movement, that the law of natural selection will soon determine, not only the material for the future of the profession, but those also whose lives will be devoted to the noble work of medical educators.

What will the medical schools do in regard to this bill? If even in a quiet way they try to defeat the enactment of so wise a law as is here contemplated, such a course would be a lamentable confession of their fear that at least a portion of their work will not bear the closest scrutiny. Rather do we hope that wiser counsels will prevail, and that the inevitable will be accepted by them in their acquiescence in measures which will elevate the standard of medical education, and endow their medical degrees with positive value.

THE UNIVERSITY OF BUFFALO.

Meeting of the Council.

A meeting of the Council of the University of Buffalo was held at the committee-room of the Young Men's Association, at 4 o'clock, P. M., February 27th. Present, the Hon. O. H. Marshall, Chancellor of the University, in the Chair, Dr. Thomas F. Rochester, Dr. Charles Cary, the Hon. E. G. Spaulding, the Hon. James O. Putnam, the Hon. E. C. Sprague, Mr. J. N. Scatcherd, Mr. John Wilkeson, Mr. J. D. Shepard, Mr. George S. Hazard, and Mr. J. N. Matthews, Secretary.

Dr. Charles Cary read the following report:

We, the undersigned Curators and Faculty of the Medical Department of the University of Buffalo, having duly examined the candidates named below have found them qualified, and do recommend them to the Council to receive the degree of Doctor of Medicine:

GRADUATES.

Herbert Wells Davis, Randolph, N. Y. Pneumonia.

Carlos E. Bowman, Bowmansville, N. Y., Cerebro-Spinal Fever.

Wm. Fletcher Wells, Rushford, N. Y., Acute Peritonitis.

Ephraim Wm. Bogardus, Seneca Falls, N. Y., Pneumonitis.

Ben Gordon Long, Buffalo, N. Y., A peculiar case of Labor, requiring artificial delivery.

Reuben Marion Root, Gaines, N. Y., Pneumonia.

Lucius Gilbert Waterman, Centreville, N. Y., Diphtheria.

Edwin Wilson Baker, Machias, N. Y., Railroad Injuries.

- Delos Burd Manchester, Cooperstown, N. Y., Injuries to Veins.
 Miles E. Reed, Rome, Pa., Acne.
 Byron S. Coleman, Brockport, N. Y., Hemorrhoids.
 Dewitt Clinton Greene, Buffalo, N. Y., Cerebro-Spinal Meningitis.
 John T. Harris, Mitchell, Canada, Cerebro-Spinal Meningitis.
 Clark Getman, Columbia, N. Y., Asthma.
 Albert Bradley Wilson, Buffalo, N. Y., Acute General Peritonitis.
 Burt E. Bidleman, Tunkhannock, Pa., Intermittent Fever.
 Samuel Amos Clark, Fredonia, Pa., Tetanus.
 Wm. O'Reilly Bradley, Rochester, N. Y., Syphilis.
 Wm. Oliver Rodgers, Jamestown, Pa., Medical Education.
 Peter Eugene Rivard, Rochester, N. Y., Hygiene and general management of health during Pregnancy.
 Frederick G. Trowbridge, Watertown, N. Y., Atony and Paralysis of the Bladder.
 Major Albert Veeder, Lyons, N. Y., Diseases due to Marsh Miasm.
 Frank Robert Burroughs, Corry, Pa., Pertussis.
 George Warren Squires, Churchville, N. Y., Spasmodic Asthma.
 John Evelyn Caneen, Leon, N. Y., Acute Diffuse Nephritis.
 Frank Benj. Darling, Leon, N. Y., Acute Articular Rheumatism.
 Frederick Ransom Campbell, Rochester, N. Y., The Economic Aspects of Sanitary Science.
 Louis Hanly Merchant, Oswego, N. Y., Albuminuria occurring in Pregnancy.
 Isabella H. Stanley, Dunkirk, N. Y., Rational Obstetrics.
 David H. Reed, Remsen, N. Y., Alcohol, and its action and uses.
 Samuel S. Kilvington, New York, N. Y., Ovariectomy.
 Wm. Thomas Wallace, Olean, N. Y., Digestion.
 Richard Ward Bamber, Carlton, N. Y., Syphilis.
 Hudson G. Willse, Columbia, N. Y., Communicable Diseases and Prevention of Spread.
 Charles Cook Ransom, Richfield Springs, N. Y., Median Lithotomy.
 John Gurdon Webster, Bath, N. Y., Identification of Human Blood.
 Alpheus Prince, Clarence, N. Y., Scarlet Fever.
 Wm. Harvey Thornton, A. B., Buffalo, N. Y., Bacteria and their relation to Disease.
 Samuel Inkermann Wells, Ft. Erie, Canada, Different modes of Dying.
 Julius Pohlman, Buffalo, N. Y., An experimental study of the action of Pilocarpine.
 Wm. Meisburger, Buffalo, N. Y., Secale Cornutum in Obstetrics.
 Myron A. King, Perry Center, N. Y., Senile Constipation.
 James E. Crichton, Perry Center, N. Y., Atmosphere.
 Albert Wanzer Scofield, Angelica, N. Y., Medical Thesis.
 Martin Elihu Gilbert, Yates, N. Y., Pneumonia.
 Fred. Wilcox, Bellona, N. Y., Cerebro-Spinal Fever.

John Coulson Parmenter, Buffalo, N. Y., Treatment of some forms of Intestinal Obstruction.

Wm. L. Wooden, Fairport, N. Y., Dyspepsia.

Bina A. Potter, Ithaca, N. Y., Variola.

John Edward Sutton, Albion, N. Y., Cæsarean Section.

James McAuliff, Olean, N. Y., Artificial Anæsthesia.

Wm. Augustus Gray, Tioga, Pa., Pyretics and Anti-pyretics.

Fletcher W. Brockway, Swartwood, N. Y., Signs of Pregnancy.

George F. H. Bartlett, Ph. B., Buffalo, N. Y., Albuminuria.

Albert Walter Cottrel, Whitesville, N. Y., Diphtheria.

John Gray, Avon, N. Y., Abortion.

Sophia Jones, Cattaraugus, N. Y., Chronic Constipation.

THOS. F. ROCHESTER, Dean.

CHARLES CARY, Secretary

For the Faculty.

William Warren Potter,

H. P. Hall,

A. E. Ellenwood,

Chas. H. Richmond,

C. B. Kibler,

John N. Cotes,

Jas. W. Craig,

Thos. D. Strong,

G. H. Lapham,

J. B. Samo,

W. P. Bemus,

On motion of Dr. Rochester, the persons whose names were thus reported were declared worthy to receive the degree of Doctor of Medicine, and the Chancellor was authorized to confer upon each of them that degree.

Dr. Rochester nominated Dr. M. Picket, of Corry, Pa., as one of the Curators, and he was unanimously elected.

Dr. Cary nominated Dr. Mullen, of Alexander, N. Y., as one of the Curators, and he was unanimously elected.

Dr. Cary then read the following communication :

BELLEVUE HOSPITAL MEDICAL COLLEGE, }
New York, March 22, 1882. }

To the Council and Faculty of the University of Buffalo :

GENTLEMEN—It is with great reluctance and sincere regret that I am compelled to resign my position of Professor of Chemistry at the Medical College.

This course is forced upon me in order that I may accept an appointment in New York at the institution where I obtained my collegiate training. Besides many advantages that will spring from my new sphere of labor, that of being brought into more intimate relations with a devoted father is the most important. Ever since I accepted the Chair of Chemistry at Buffalo, he has been put

to great inconvenience owing to my absence, and it is my duty and a great pleasure as well to be able to requite in small measure his self-sacrifice. Having taken upon me matrimonial relations, it is not as easy as it was heretofore for me to lead a sort of a nomadic existence, and I consider it important for me to concentrate my efforts and scientific labors in my own home.

It is painful to sever a connection which has brought me so much keen enjoyment. My relations with the Faculty and Council have always been so agreeable that I shall have only pleasant memories of one and all.

Going as a stranger among you, I appreciated the kindly welcome extended from all sides, and though the occasions of our meeting in future may be fewer, I shall hail them with pleasure.

During five years' labor in a common cause I need not assure my colleagues that my interest in the success of the school will not terminate with that of my official capacity as an instructor.

I am indebted to my associates for a most cordial seconding to all suggestions I offered concerning the department of chemistry. Especially was this the case with our respected and beloved President.

Thanking you for the mark of confidence which you manifested when you called me to so honorable a position, and trusting that I may continue in your esteem, I have the honor to be,
Your obedient servant,

CHARLES A. DOREMUS.

On motion of Dr. Cary, the resignation of Dr. Doremus was accepted.

Dr. Rochester moved that Dr. R. A. Witthaus, of New York, be elected Professor of Chemistry and Toxicology, and he was unanimously elected.

Dr. Cary then read the following communication, which he said was written in reply to a letter from the Faculty, appealing to Professor Miner to retain his Chair :

BUFFALO, Sept. 26, 1882.

To the Faculty of the Buffalo Medical College, through Professor Charles Cary, M. D., Dean of the Faculty :

The communication from Professor Stoddard informing me of the action of the Faculty at your late meeting is received and contents noted.

Feeling confident that my action in presenting my resignation is well-advised, being the result of careful consideration in view of all the circumstances, I see no reason for changing my mind, and desire you to regard it as final.

I assure you I entertain none but the most kindly feelings toward my colleagues, and fully appreciate their many acts of kindness extended to me during my recent illness, and for which I desire they will accept my sincere thanks.

I sever my connection with your honorable body with best wishes for the prosperity of the College, and trust the very pleasant relations I have enjoyed with the Faculty may not be interrupted or diminished.

Yours, very respectfully,

JULIUS F. MINER.

Dr. Cary said that the Faculty had felt constrained to accept this resignation, and they recommended that Dr. Miner be appointed Emeritus Professor of Special Surgery.

On motion of Dr. Rochester, Dr. Miner was unanimously elected Emeritus Professor of Special Surgery.

Dr. Rochester, in behalf of the Faculty, extended a cordial invitation to members of the Council to attend the banquet at The Genesee this evening.

The Chancellor suggested that it might be convenient to the Council to have a President other than the Chancellor. He therefore offered his resignation as President of the Council. The suggestion was not acted upon.

On motion of Dr. Rochester, the Secretary of the Faculty was instructed to write to Dr. Austin Flint, of New York, requesting for publication a copy of the address delivered by that gentleman at the last commencement exercises.

On motion the Council adjourned.

J. N. MATTHEWS, *Secretary*.

THE ALUMNI ASSOCIATION OF THE BUFFALO MEDICAL COLLEGE.

The ninth annual meeting of the Association was held at the Medical College building, Tuesday, Feb. 27th. President, Dr. Wm. Ring, in the Chair, and Dr. C. M. Daniels, Secretary.

The following alumni were present:

1847—James E. King, Buffalo; William Ring, Buffalo; Zera Hurd Blake, Dansville, N. Y.

1848—C. C. Wyckoff, Buffalo; G. H. Bennett, Lyman, N. Y.; Horace Hoyt, East Aurora, N. Y.

1851—Thomas D. Strong, Westfield, N. Y.

1852—John R. Cotes, Batavia, N. Y.

1859—W. W. Potter, Buffalo.

- 1860—C. H. Richmond, Livonia, N. Y.
 1861—E. S. Carpenter, North Cohocton, N. Y.
 1862—C. W. Coyle, Buffalo.
 1865—H. Lapham, Clarence, N. Y.
 1866—Conrad Diehl, Buffalo; M. B. Shaw, Eden, N. Y.
 1867—E. C. W. O'Brien, Buffalo.
 1870—C. B. Kipler, Corry, Pa.
 1871—A. H. Briggs, Buffalo; J. J. Walsh, Buffalo; D. W. Harrington, Buffalo.
 1872—F. E. L. Brecht, Buffalo; J. S. Halbert, Buffalo; Charles B. Knowlton, Buffalo; P. M. Wise, Willard, N. Y.
 1873—W. H. Slacer, Buffalo; F. A. Burghardt, Buffalo; Joseph Fowler, Buffalo; C. R. Seeley, Attica, N. Y.
 1874—Bernard Bartow, Buffalo; E. N. Brush, Utica
 1875—William B. Clothier, Buffalo; D. T. Pierce, Argyle, N. Y.; F. A. Mandeville, Rochester.
 1876—W. J. Packwood, Buffalo; A. A. Hubbell, Buffalo; B. A. Ellinworth, East Otto, N. Y.; Mrs. Mary B. Moody, Buffalo; W. D. Greene, Buffalo.
 1877—Joseph Haberstro, Buffalo.
 1878—Charles A. Ring, Buffalo Plains; Ernest Wende, Alden; C. F. Howard, Buffalo.
 1879—Frederick Peterson, Buffalo; Eugene Storck, Buffalo.
 1880—Mrs. M. J. Slight, Rochester; W. C. Barrett, Buffalo; Frank O. Vaughan, Buffalo; Edward Clark, Buffalo; C. H. Woodward, Blooms, N. Y.; C. M. Daniels, Buffalo; S. H. Warren, Buffalo; B. H. Grove, Buffalo.
 1881—J. J. Birmingham, Buffalo; William A. Hobday, Alton, Pa.; Mary E. Runner, Buffalo; C. C. Frederick, Buffalo.
 1882—E. W. Wollaber, Cambria, N. Y.; Willis G. Gregory, Buffalo; Eli H. Long, Buffalo; Frank H. Potter, Buffalo; J. W. Putnam, Buffalo.

The following officers were elected for the ensuing year:

- President—Dr. E. N. Brush, Utica, N. Y.
 First Vice-President—Dr. Horace Hoyt, East Aurora.
 Second Vice-President—Dr. Conrad Diehl, Buffalo.
 Third Vice-President—Dr. D. W. Harrington, Buffalo.
 Fourth Vice-President—Dr. John H. Taylor, Holly, N. Y.
 Fifth Vice-President—Dr. P. M. Wise, Ovid, N. Y.
 Secretary—Dr. A. M. Barker, Buffalo.
 Assistant Secretary—Dr. C. M. Daniels, Buffalo.
 Trustee—Dr. C. C. Wyckoff.
 Executive Committee—Dr. W. C. Barrett, Dr. Bernard Bartow, Dr. E. C. W. O'Brien.

In the afternoon session Dr. P. M. Wise read an essay on "The Responsibilities of the Examining Physician on the Commitment of the Insane."

Dr. J. B. Andrews read a very able paper on "The Treatment of the Insane."

Dr. Frederick Peterson read an interesting paper on "The Alliptic Art."

THE MEDICAL COMMENCEMENT.

The commencement exercises of the Medical College were held at St. James Hall on Tuesday evening, Feb. 27, 1883.

Prof. M. D. Mann delivered the address to the graduates, and Hon. James M. Smith, Judge of the Superior Court of Buffalo, spoke to the alumni. The address of Prof. Mann was eminently practical and suited to the occasion. It contained many humorous illustrations with such advice as the class of young men, just entering upon the work of the profession, require.

Judge Smith's address was such an one, as the earnest Judge, whose life is a noble example of industry and energy, would be sure to give on an occasion of this kind.

The annual banquet and reunion was held at The Genesee. The seat of honor at the head of the table was occupied by Dr. Wm. Ring, one of the oldest alumni of the college.

The following toasts were proposed, each eliciting a happy response :

"Our Beloved Alma Mater." Response by Dr. Thomas F. Rochester.

"The Medical Profession," Response by Dr. Andrews.

"The Legal Profession." Response by the Hon. E. C. Sprague.

"The Clergy." Response by the Rev. G. W. Cutter.

"The Alumni Association of the University of Buffalo." Response by Dr. E. N. Brush, of Utica.

"General Science." Response by the Very Rev. Dean Hart.

"The Medical Societies." Response by Dr. J. W. Keene.

"The Board of Curators of the University of Buffalo." Response by Dr. C. H. Richmond.

"Our City." Response by the Hon. John B. Manning, Mayor of Buffalo.

"The Press." Response by Joseph O'Connor, Editor *Daily Courier*.

"The Ladies." Response by Dr. Lucien Howe.

"The Graduating Class of '83." Response by Dr. Wm. A. Gray.

THE BUFFALO PROVIDENT DISPENSARY AND HOSPITAL
ASSOCIATION.

The high character of the gentlemen who constitute the consulting and attending staff of this association gives assurance of the organization of an agency long needed in meeting a class of patients which, for several years, have been deprived of the benefit of professional assistance.

As implied in the name selected for the Dispensary, it is not intended to pauperize the public by giving with too lavish a hand professional services to all who apply. It is the aim to discriminate, as far as possible, and to co-operate with the various charities now existing in the city, to extend to the worthy poor the best medical aid it is possible to render. With such motives the Provident Dispensary cannot fail to be successful, and we trust that the principles on which it is based will be faithfully carried out in the administration of its interests. We give the names of its officers and the consulting and attending staff:

OFFICERS.

President—William S. Tremaine, M. D.

Vice-President—A. R. Davidson, M. D.

Treasurer—Dougal Macniel, M. D.

Secretary—Henry D. Ingraham, M. D.

CONSULTING STAFF.

Surgeons—Charles C. F. Gay, M. D.; John Cronyn, M. D.; John Boardman, M. D.

Physicians—John Hauenstein, M. D.; Edward Tobie, M. D.; George N. Burwell, M. D.

ATTENDING STAFF.

Surgery—William S. Tremaine, M. D.; Herman Mynter, M. D.

Diseases of Women—Thomas Lothrop, M. D.; Henry D. Ingraham, M. D.; Carlton C. Frederick, M. D.

Diseases of the Digestive Organs and Kidneys—A. R. Davidson, M. D.

Diseases of the Throat and Chest—Charles G. Stockton, M. D.

Diseases of Children and the Nervous System—Joseph W. Keene, M. D.; Frederick Peterson, M. D.

Skin Diseases—Dougal Macniel, M. D.

Diseases of the Eye and Ear—Frank W. Abbott, M. D.

The Dispensary has opened its rooms at 385 Washington street, and provides excellent facilities for the work it aims to perform.

EDITORIAL NOTES.

OUR editorial confrere, Dr. Davidson, with a view to enjoy a long-coveted rest from work, and to extend his field of professional observation, sailed Feb. 24th for London, where he intends to avail himself of the extensive clinical opportunities of that great medical centre. We are promised occasional contributions from his pen, which will be sure to interest our readers and especially those who know from personal acquaintance the ability and scientific attainments of our accomplished collaborator. We wish a hearty *bon voyage* to our absent fellow-worker, and a safe return to a field of professional labor, only awaiting to be cultivated by such an earnest and energetic worker as our friend has proven to be.

Reviews.

A Guide to the Practical Examination of Urine for the Use of Physicians and Students. By JAMES TYSON, M. D., Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania; President of the Pathological Society of Philadelphia, etc., etc. Fourth edition; revised and corrected, with colored plates and wood engravings. Philadelphia: P. Blakiston, Son & Co., No. 1012 Walnut Street. 1883.

This is a book which has well deserved to reach a fourth edition. We have only to say of it, what we have said before, that it is one of the best working guides for the examination of urine extant. This last edition has been improved by the correction of some typographical errors, the introduction of some new illustrations, and a handsome lithographic copy of Vogel's Scale of Urine Tint.

Pocket Therapeutics and Dose Book. By MORSE STEWART, JR., B. A., M. D. Third edition; revised and enlarged. Detroit, Mich.: Geo. D. Stewart & Co. Cloth, \$1.00; Morocco, \$1.50.

This little book has reached a third edition—an evidence that it is in demand. It is one of the best books of its class and contains a great deal of information, conveniently classified for ready reference and always correct and accurate so far as it goes.

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Original Communications.

SOME PRACTICAL REMARKS UPON THE SUBJECT OF INSANITY.*

BY JUDSON B. ANDREWS, M. D.

Superintendent State Asylum for the Insane, Buffalo, N. Y.

GENTLEMEN—I now address you at the request of Dr. Barrett, the Chairman of your Executive Committee. By his designation of the subject, I am relieved of one of the difficulties of the situation. He chose for the occasion, "Some practical remarks upon the subject of insanity." These remarks have been written amid the press of other duties, and hence I ask your indulgence.

Insanity is constantly attracting more attention on the part of the medical profession and of the general public. The physician is interested in it, as a medical subject, while the public consider most largely its humanitarian and economic aspects. It has become an important element in social science, which deals with the questions of its prevention, causation, and the best methods of care of the insane, consistent with public policy and the duty of society toward the sick and afflicted. It is not this

*Read before the Alumni of the Buffalo Medical College.

view of the subject on which I wish to speak to you, since, as physicians, you are more directly interested in the medical side.

The first question that confronts us is: What is insanity? This is answered in the most general way by the single word disease, or as some more critical would say, a symptom of disease. It would be differently limited and qualified according to the theory entertained by the speaker. By one it would be called "disease of the mind," by another, "disease of the brain whose secretion is mind," and by a third, "abnormal mental action depending on disease of the brain."

In the first answer we recognize the metaphysical view or the spiritual theory which for ages controlled not only medical thought but the intelligence of the times. This theory recognized insanity as a perversion of the soul or the possession of an evil spirit, the punishment inflicted by a divine power for sins committed.

Hence the belief in demonology, and from this divine control, the belief in the inspiration of the lunatic, who came to be consulted as a soothsayer, a foreteller of future events; and the incoherence and raving of the mad man were oracular responses to those who sought advice and guidance in their affairs. But we need not go back to the remote ages to find evidences of this theory; it still exercises its influence; we have it constantly before us in the nomenclature of insanity, in the terms mental disease, disease of the mind, and a common idea that in the treatment of insanity there are some peculiar medicines employed to produce an effect on the mind. This theory would make insanity a sin to be cured by repentance and divine forgiveness, and for treatment the aid of the priest and not of the physician should be invoked. It is not infrequent, as you know, that the solace and prayers of the clergy are sought in cases of melancholia, laboring under religious delusions. This is certainly consistent with the idea that insanity is a disease of the mind.

Let us hear what one of the prominent advocates of this theory has to say: "Insanity is a loss of moral liberty. It never depends upon a physical cause. It is not a disease of the body but of the mind—a sin. It is not and cannot be hereditary because the thinking ego, the soul, is not hereditary. The man who has during his whole life before his eyes and in his heart the image of God, has no reason to fear that he will ever lose his reason. Man has a certain moral, which cannot be conquered by any physical power and which falls under the weight of his own faults."*

Under this theory the physician has nothing to do, as without physical disease there is no call for his advice or his drugs.

The logical outcome of this view does not offer any encouragement to the *spiritual adviser*, as the very existence of *disease* of the mind implies the possibility of its decay and death, and thus destroys the hope of immortality and future happiness.

The second theory of insanity, as a disease of the brain, whose function is mind, makes the mind simply a secretion from the brain. Nothing more than a force developed by the action of the brain. It is illustrated as follows: "As a good liver secretes good bile, a good candle gives good light, good coal a good fire, so does a good brain give good mind. When the brain is quiescent there is no mind." This theory, prominently brought forth a century ago by Cabanis, has at this time some advocates. It is the strictly materialistic view, and finds no place for the existence of the mind separate from the body. When vital action ceases and the organism dies mind is extinguished. The death of the body ends all. There is no future accountability, for man is bounded by his physical environment. Such a theory, although repugnant to the Christian world, recognizes the disease of the brain as the essential factor which calls for medical care and treatment.

The third and most commonly accepted theory of insanity assumes the mind as having a separate and independent exist-

*Heinroth, a celebrated German Psychologist.

ence apart from the body, and that the brain is the organ of the mind. It views the mind as the spiritual part of man, the agent which uses the material organ, the brain, as the instrument of communication with the external world. It is the ego of the metaphysician, the reasoning soul of the theologian, eternal, immortal, indivisible, subject neither to disease nor decay. It is separated from the body, though it maintains a relation to it so intimate as hitherto to have eluded the profoundest research to explain.

In accord with these theories, when the brain is in a state of health the mind acts normally, unimpeded and unfettered in its operations. This is a normal mental state, or sanity.

In further explanation the materialist would say, that in a healthy state of the brain, the secretion, or emanation, or mind must be normal, and therefore sanity exists.

By the accepted theory, the brain, affected by disease, gives evidence of the change by exaggerated, diminished or perverted mental action, which is insanity.

It is not necessary for us to attempt to prove that insanity depends upon disease of the brain. The proof is constantly before us, and the researches of chemistry and of the microscope in the laboratory of the pathologist are constantly adding to them. Though it may be claimed by cavilers that in some instances insanity has existed, and no post mortem lesions have been discovered, it is only fair to assume, from the great mass of evidence, that they do exist, but are not detected, either from lack of thoroughness in the examinations or because they are of a character which elude our present means of investigation.

In reply to the question, what is insanity, you will expect from me a more definite answer than has been given. To define it so as to include all its phases and to exclude all such mental states as are not properly classed under the term is not an easy task. To attempt such a strict definition would only lead to failure.

Burton, in his "Anatomy of Melancholy," says: "If you would describe melancholy, describe a phantastical conceit, a corrupt imagination, vain thoughts and different, which, who can do? The four and twenty letters make no more variety of words in diverse languages than melancholy conceits produce diversity of symptoms in several persons."

The truth of this will be at once appreciated if we consider the infinite variety of morbid mental phenomena, which it is proposed to include within the limits of a definition.

Many definitions have been presented, some of which in their frequent repetition are familiar to all. Locke defines insanity by the pithy sentence: "Madmen reason correctly, but from wrong premises." This, if true, could apply to a small part, only, of the insane, and is therefore useless as a general statement.

Cullen says it is "a lesion of the intellectual faculties without pyrexia or coma." This is a negative, so far as disease is concerned, and is not sufficiently comprehensive. Combe says, "Insanity is a morbid action in one, in several, or in the whole of the cerebral organs, and as its necessary consequence, functional derangement in one, or in several, or in the whole of the mental faculties." This is a phrenological definition and divides the brain into organs, and the mind into separate faculties, a theory which has not stood the test of time and experience.

We might continue these quotations to a tiresome length, but forbear. We present a definition which more nearly meets the requirements, and while it is not claimed to be beyond the reach of criticism, it has the sanction of high authority and is believed to fulfill the requirements more nearly than any of which we have knowledge. "Insanity is a more or less prolonged departure in the individual from his normal mode of thinking, feeling or acting, the result of disease of the brain."

This comprises the whole of man's mental life, as manifested in the emotions, intellect and will, and places the disturbance of any or all parts of it, which amounts to insanity, upon the firm basis of disease, disease of the brain, the only basis which is tenable ground for the physician. It will be noticed, and this is a most important part of the definition, that the individual is to be compared with himself. To judge of insanity there is no fixed criterion, no definite standard by which the emotions, thoughts or conduct of the individual are to be measured, and those which come up to the mark are to be set aside as indicating sanity, while those which vary from it with equal certainty denote the presence of insanity. As you know and act upon the knowledge in your daily experience, every person is individualized and fully identified by his physical and mental characteristics. These relate to the features, to the form, gait and movements of the body, to the modes of thought and expression, to certain manifestations of emotional life, and to a standard of morality which controls the conduct. All of these characteristics, as modified by the circumstances of birth, education, occupation, social position and the like conditions, constitute the personality, the norm of the individual. Recognizing the principle that every person is a law unto himself, it is necessary, before we predicate insanity in any given case, to become familiar with the previous history of the individual and note the departure from the normal state.

Another important feature of the definition is in the words a more or less prolonged departure. This is intended to exclude cases of temporary delirium from fever, from injuries, from the action of narcotic drugs, alcohol, etc. Although any of these may be the efficient cause of insanity and actually produce it, yet, as ordinarily met with in practice, such changes do not amount to insanity.

Such then are the changes indicative of insanity. To repeat, they must constitute a departure in the individual from his normal mode of feeling, thinking or acting; the departure must

be more or less prolonged and not of temporary duration, and essentially important, they must be the offspring of disease of the brain.

Dr. Hack Tuke, a most competent observer, speaking of this subject, uses the following language: "Seeing, in short, that our mental powers depend in this life upon the health and integrity of a vast number of brain cells; that this health and integrity require suitable nutrition, both as to quantity and quality, and a free supply of oxygen, it must be that the mind, in its contact with the world, will frequently suffer; indeed the wonder is, not that so many become insane in the midst of so great a neglect of the laws of nature, so much vice, lamentable want of mental cultivation on the one hand and excessive unregulated mental work on the other, but that so many escape." In this sentence are crowded the principal factors for the physiological action of the brain, as well as many of the causes of mental disturbance, stated in plain, familiar words.

We now direct your attention to some of the first symptoms of mental disturbance. They have a peculiar significance to you as physicians, and their early recognition is of great moment to the patient, in enabling you to adopt such measures as may avert a threatened attack of insanity. The pathologic processes in the brain are preceded by certain changes in the physical system and in the mental habits of the individual, which, if rightly understood and properly met, may yield to medical treatment.

These symptoms will be found in one or more of the following directions: First, disturbance of function; second, of sensation, and third, of feeling. Of the first, impairment or loss of sleep is the most common. Of the necessity of the integrity of this function for the health of the body and for the proper exercise of the mental powers, and of the serious consequences of its continued disturbance, I need not speak. You know the story too well. You have painfully watched the exhausting effect upon your patient in the failure of health, and loss of strength,

and seen the mind pervaded with feverish restlessness, giving way to groundless suspicions and fears, till after a vain struggle it yields to the malign influence, and insanity is fully established. In a normal, healthy condition sleep naturally follows activity, action and repose being the physiological sequence. In disordered states of the brain the operation of this law is often interrupted; action is but the stimulus or spur to increased activity. From the disturbance of the circulation within the cranium, there results an irritability of nerve tissue which may prolong the existing excitement.

Disturbance of other functions frequently exist; among them are loss of appetite, indigestion, constipation and general derangement of the secretions. The circulation is affected, the heart showing signs of feebleness, and the pulse increased in frequency and diminished in force. The vaso-motor disturbance, marked by suffusion of the neck and face, indicates depression and irregularity of nerve action.

On the other hand, the heart's action may be increased, the pulse full and bounding, the face flushed, the eyes injected and the pupils contracted, evidences of a hyperæmic or congested state of cerebral vessels. Again, there may be palor, with dilated pupil and coldness of the extremities, indicative of anæmia and a falling off in the quality of the blood.

With the conditions of the circulatory system, and depending upon them, there may be changes in the sensations.

The most frequent relate to the head. There may be headache, or pain, and a sense of weight, where an apparent effort is required to hold it up, or of lightness, as if the skull was empty. The patient sometimes compares the sensation to a peculiar feeling, as if the head was made of wood; occasionally these form the basis of delusion. A very common complaint is made of the sensation of a band drawn tightly about the head, of heat in the vertex, of throbbing in the arteries, and of singing in the ears. Other parts of the body are also affected. There are abnormal sensations referred to the abdominal organs, especially in hypochondriacal cases which develop into fixed delusions.

Changes on the side of the feelings next attract our attention and complete the array of symptoms strongly indicative of the approaching attack of insanity. "Among the emotional disturbances may be enumerated slight depression of spirits, especially if this alternates with a sense of exaltation and buoyancy." "If the world seems unreal, if the path of life seems gloomy, if the slightest circumstances bring tears to the eyes, these are incipient symptoms of irregular brain action." "So irritability of temper, moroseness and irascibility in the naturally sweet and amiable, suspiciousness in an open, trusting nature," change of manner toward those previously loved, unfounded jealousies in the beginning vague and shadowy, a feeling of the existence of opposition to the individual and to all his plans, forebodings of impending evil indefinite and indefinable, indecision of purpose, not only in regard to matters of importance, but in trivial affairs of life, as of the clothing to be put on, the food to be eaten, all of these point in the same direction.

An unnatural levity in contrast to former disposition, increased mental activity, leading the quiet and reserved to become talkative, obtrusive, self-confident and boastful, in short, changes in the habits, conduct and feelings of the individual without adequate cause, when combined with the physical changes before mentioned, may well excite question and lead to inquiry as to the mental state of the person concerned.

There are cases of insanity more rapid and open in their occurrence, such as follow acute attacks of disease, injuries, excessive use of stimulants, and the like, which present the more marked symptoms, either the noise and violence of mania or such a degree of depression as leaves no question in diagnosis, or of the necessity of immediate treatment. We have, however, chosen to speak of those forms which give warning of their approach and thus enable the physician to put in practice the knowledge of his art in the direction of prevention.

It is the duty of the profession to recognize the significance of these changes and to take the necessary steps to guard against their further progress toward insanity.

Success will not always crown our efforts, but they should not be intermitted. The public look to the profession for relief from the oppressive burden of lunacy with which it has to contend and for which it has to care. Much has been written regarding the prevention of insanity, but the people do not heed the warning voice. Led by the desire to excel in the strife for riches, position and power, or, on the other hand, compelled to work far beyond their strength, to struggle with poverty and actual want, they press forward, or are forced on by the circumstances of life till some additional burden, in the form of grief anxiety, or ill health, develops the changes indicative of mental disturbance. It may not be out of place for me to ask if we do not too often under-value the importance of these symptoms, or misinterpret them to the loss of valuable time and to the detriment of our patients. Do we not too often delay to institute proper measures in the way of advice and treatment till the disease is openly declared and the most favorable time for benefit is past? It is too late in the day for me to attempt to prove to you the already established axiom that the early stage of insanity is the curable one, and that in the years after, treatment is mostly barren of recoveries.

In the diagnosis of insanity we may be materially aided, if we bear in mind that most frequently the disease has its history, in the changes brought to your notice, and that in the greater number of cases there is depression of spirits, varying in degree from slight despondency to well marked melancholy. At this stage it may be impossible for us to say what may be the result, whether we will have to treat a case of melancholia, or whether, after a period of longer or shorter duration, the symptoms of mania may not supervene.

Continuing the consideration of the subject, we come now to speak of cases of fully developed insanity, and I venture, at this point, to give some hints of the methods of dealing with them which experience has shown to be valuable; and first, as regards the examination of the patient whose mental state is in question.

Gather from the friends all the information they may have to give relating to the past and present history and normal characteristics of your patient, and especially all the facts which tend to induce a belief in the existence of mental disorder. Then seek an interview with the patient, either alone or with a person who has the closest friendship and the fullest confidence combined with the most intimate knowledge of the case. Exert yourself to gain the confidence of the individual to be examined. This can often be accomplished by the introduction of some subject in which he is interested, perhaps his occupation, his surroundings, or some topic upon which you know he has gained, by study or experience, a special degree of knowledge. This can be easily turned to the history of the individual, the state of his health, when all the organs of the body can be examined, and the influences of a depressing or deteriorating character can be discovered. Follow up the course thus begun; make it to include the habits, social relations, religious views, the occupation or business affairs, so far as they may be a source of anxiety and worry; in short, have before you the prominent and controlling factors in the physical, moral and mental condition, and note the departure from the normal state of the individual. Thus you will discover the delusions, if any exist, and be able to arrive at an intelligent opinion. If, however, you cannot satisfy yourself upon one visit, repeat it until you are satisfied you have arrived at the truth. You will be surprised at the readiness with which your questions are answered and trust is reposed, and still more of the appreciation which the patient has of his own condition.

Suppose he has melancholia with its depressing ideas, it is always well to inquire as to the presence of suicidal tendencies; put the question directly, though guardedly, to your patient, and you will usually be answered truthfully, and perhaps, to the astonishment of friends, he will narrate some attempt or preparation therefor, and thus put you on the watch against the success of any efforts in this direction. If such feelings exist, it is well to explain them as symptoms of the

disease, which may be expected and which must be struggled against. It often fortifies the mind of the sufferer if the act is properly characterized as cowardly and sinful, and the terrible consequence to one's family and friends are pointed out. Such arguments sometimes furnish a moral support to the patient which will enable him to successfully combat this sad phase of his disease.

If delusions are expressed, it is well to characterize them as such and to expose their error. In case they are fixed and control the patient, neither argument nor persuasion will avail to remove them. Combating them vehemently only irritates, and strengthens the belief in their reality by the attempt of the patient to sustain them. Ridicule has no better effect. A calm and quiet denial, with a full statement of the facts, is true kindness to the patient, but if the state of mind is such that this induces disturbance or violence, it is better to pass it over in silence. Do not be led into an altercation, as this will destroy your influence. A mild and quiet manner in conversation, unruffled by any word or act of the patient, exercises a wonderfully restraining and controlling influence.

Honest dealing with the insane gains their respect and confidence. If physicians and friends could only realize the harm and irritation produced by deception, it would never be resorted to. For a physician to gain access to a patient, to examine him for lunacy under an assumed name, or to conduct the examination under the plea of transacting some business, such as purchasing some of his supposed holdings, or selling property to the man, rich only in his imagination, is simply perpetrating a fraud which is rarely forgotten or forgiven by the patient. So, for friends to convey an insane person to an asylum under the plea of a visit to the institution, or that the asylum is a hotel where they can obtain a meal or stay for a day while transacting business, only exposes them to his anger when the deception is discovered, and undermines his faith in mankind. It is an injustice and does injury to the patient.

There is quite a common belief, with which you are, no doubt, familiar, that the insane are not to be opposed, but humored in their delusions and peculiarities. In receiving the history of a case from friends, they frequently state—as if they desired credit for it and had done just the right thing—that the patient has had his own way and not been opposed in anything. He may have been allowed to turn night into day, and day into night, to go wherever and whenever he chose, to make purchases, to dispose of property, to follow his vagaries of dress and conduct, in short, all who come in contact with him have yielded their good sense and judgment to the whims of the insane man under the mistaken idea that it is a duty they owe the patient and the correct thing to do. It is not an act of kindness to assent to the delusions of the patient or be controlled by them. As a case in point a patient gives as proof of the truth of his claim that he is Jesus Christ, that his wife and family acknowledge the fact by kneeling to him and addressing him by that title. Another patient's delusions are the more fully established, because some injudicious friends imposed upon his credulity by making imaginary sales and drawing bogus deeds and contracts, till his delusive wealth exceeds the real wealth of a Vanderbilt. These men were wronged and injured by the conduct of their friends, as their delusions are only the more firmly fixed.

The patients whose delusions of greatness and power lead them to believe they are kings and queens, or hold other high positions of honor, if they are addressed as such, treated with the mock respect due their supposed rank, and allowed to decorate their person, to confer titles upon others—they are only strengthened in their belief, and when they recover will know they have been made the butt for ridicule, and that their suffering has been but the jest of others' folly. The insane should be treated as intelligent and responsible beings, and led to conform so far as may be possible to the ordinary regularity of life and habits. In this way you will do them the most good and preserve your own self-respect.

The changed conditions, induced by insanity, often demand the removal of the patient from the surroundings in which they are generated and fostered. In some cases, especially of mild melancholia, without fixed delusive ideas, a visit to the house of a friend, or the change of scene, gained by traveling with a judicious and cheerful companion, may be of benefit. This should not, however, be recommended, unless the patient is in a physical state not only to endure the fatigue and inconveniences of a journey without injury, but he must be in a mental state to be diverted, and to have his attention attracted by the changing views and scenery. It is cruel to make a sick and feeble patient, who is so absorbed in his unhappy state as not to appreciate the constantly varying surroundings, leave the comforts and society of home for the discomforts of life in a hotel and the weariness of travel. In such a case irreparable injury may be done to the patient. Whenever this step is proposed, it should receive the careful consideration of a physician before it is recommended. It is not a form of treatment which can safely be adopted in a routine way.

In most cases of insanity removal to a hospital, adapted to the care of the insane, offers the best advantages to the patient, with the greatest protection to the public, and upon the physician the law places the responsibility of deciding upon the propriety of this course. It requires the certificate of two physicians, duly qualified as examiners in lunacy, to be approved by a judge of the district in which the patient resides. Under this law many thousand patients have been committed to the asylums of the State, and the judgment of the physicians has been almost universally approved by the judiciary, so that the right of a trial by jury, which is made optional with the judge, has rarely been exercised. This work has not, on the part, either of the medical or legal profession, been a matter of routine or careless indifference, but has been carefully and conscientiously performed.

The medical profession is not justly open to the charge so flippantly made and so often reiterated, by those whose ignorance or prejudice is wonderfully exhibited when they come to speak of lunacy matters, of conniving, for substantial reasons, at committing patients to an asylum in disregard of the rights of the individual. There is no basis or shadow of truth for any such statement, as experience shows that the profession is as cautious in giving certificates of lunacy as in the duties which involve the life of the individual, and that it acts from the same high motives, the good of the patient. This very cautiousness sometimes, however, works an injury to the patient, as steps for his care are put off till some act of violence, toward himself or others, makes action a necessity, when it is found that the disease has acquired a foothold which destroys all reasonable hope of recovery.

This is owing in part to the sentiment of the community, the influence of which cannot have escaped your notice. In other forms of disease the judgment of the physician is ordinarily accepted without question, but in insanity, a form of disease which presents special difficulties in its diagnosis, there is a freedom of non-professional opinion which assumes to question, not only the existence of the disease, but the motives of the physicians and friends in adopting a course of treatment sanctioned by law and acknowledged to furnish the best chances of recovery to the patient. This opinion is often based upon the delusions of the insane. Unfounded jealousies and assertions of conspiracies to gain possession of the property of the patient, and the like delusions, are accepted as realities and create a feeling as senseless as it is unjust.

There is a tendency to consider the question of a man's insanity in the light of a political matter, to be decided by a majority vote, and that every one in the community is entitled to that vote. It is on this principle that a trial by jury is demanded, as if a jury of six or more men were required to tell whether a man was sick and needed treatment in a hospital. In

reading over the proposed legislation, on the subject of insanity, one might fairly believe that a sick and insane man was somehow mistaken for a criminal. We find, in many of the proposed changes, the following language, that the "accused" "shall have a trial," "before a jury" and "be defended by counsel." What has the poor man been guilty of that all the paraphernalia of the criminal court should be brought into use. We have always supposed that the insane were sick and disordered people who needed the care of a physician, and that, as in other form of disease, he was the proper person to diagnosticate the case and prescribe the treatment. This demand for a trial by jury is the one radical change in the law of commitment which seems, at the present time, to fill the public mind. This law has been in operation for several years in the State of Illinois, and it may not be out of place for me to quote the opinion of a most competent observer as to its practical results. Dr. Carriel, the Superintendent of the Central Illinois Asylum, in his last report, uses the following language: "It is probably in the experience of every superintendent of the State, as it certainly has been in mine, to notice how many have been deterred from making application for their friend's admission to a hospital on account of the laws of this State requiring a public trial, a judge, jury and lawyers, just as in a criminal proceeding. I say many are kept out of the hospital in the early stage of disease, on account of the repugnance and dislike, in the minds of friends, to this public trial. Many such cases come under my personal notice. It seems strange that our law makers should be so tenacious in retaining the provision. If a man breaks his leg or is stricken down with fever, it is not deemed necessary to have a public examination and order for commitment before he can be placed in a hospital for proper treatment, but if a poor woman, from nervous shock in child bed, is seized with delirium and imagines that those whom she loved best are now turned against her, and have become her worst enemies, she must be taken in her weakness, through mud or over frozen roads, often many

miles, to the county-seat, to have these things publicly told about her; and all this for the protection of liberties of the citizen, it is claimed, when in no other State is such a law found necessary, and although the charge that sane persons have been confined, for selfish or corrupt purposes, in any State hospital for the insane in this country, cannot be substantiated. We live in hope that even in this State the day will come when the liberties of her sick and afflicted may be thought safe in the hands of the medical profession, whose prerogative it should be to decide the question of the necessity or desirability of commitment to a hospital; then will one source of chronic insanity be removed."

This change of law from the present statute of commitment by certificate of two physicians, with the other safeguards specified, to a commitment only on trial by a jury, is demanded on the ground of greater safety to the rights of the citizens and to prevent sane people from being sent to asylums. Let us, for a moment, examine this phase of the subject. In a work written by Dr. Ordronaux, late Commissioner in Lunacy, entitled "Judicial Aspects of Insanity," and which is an acknowledged authority in the legal profession, we find the following remarks upon the subject of the trial of questions of mental state by juries:

"The experience of every day adds weight to the conviction that a jury of laymen is an unsafe tribunal to which to commit an issue of insanity. So far from such a tribunal affording any protection to personal liberty, it happens to operate so frequently in an opposite and oppressive direction that its findings have ceased to have any weight in the eyes of scientists. As an example of the perils to personal liberty from jury trials in issues of insanity, may be cited the report of the Superintendent of the State Asylum at Utica for the year 1872, which shows that fourteen cases were discharged as not insane." "All of these," Dr. Gray says, "were committed under public authority and on certificates of insanity, or a trial by jury. On the other

hand, no single instance of error in diagnosis occurred either in public or private cases when the family physician has made the examination and recommended the case to be sent to the asylum." This was written before the law of 1874 was enacted, which embodied the feature of certificates of two medical men—approved by judicial sanction. The operation of this law has been highly satisfactory and needs no radical changes, either for the protection of society or of the individual.

Individual rights are fully protected by the clause which gives the judge discretionary power to "call a jury in each case to determine the question of lunacy;" and still further the law provides for an appeal, in the following language :

"If any lunatic, committed under the provisions of this article or any friend in his behalf, be dissatisfied with any final decision or order of a county judge, special county judge, etc., he may, within three days after such order or decision, appeal therefrom to a justice of the Supreme Court, who shall, thereupon, stay his being sent out of the county, and forthwith call a jury to decide upon the fact of lunacy."

Perhaps the best proof of the sufficiency of the law of commitment is found in the fact that these additional safeguards of trial by jury and appeal from the judge's approval are rarely, if ever, called into use. They stand upon the statute books as a reserve power of the law to meet any possible emergency, but which it has not been necessary to invoke.

Why, then, the demand for a trial by jury, in every case, when, although legally provided for, it is not used in any cases? It would seem that ignorance of the present statutes could alone give rise to the call for a change. There is one change we would advocate, and this is an addition to the present law. I refer to voluntary commitments to insane hospitals. Cases are occurring, from time to time, in which the individual appreciates his condition, sees insanity approaching, and desiring to place himself under proper care, seeks admission to an asylum. Here he is met by the legal provisions of two medical certificates, etc.

He cannot find any medical men who are willing to certify to his actual insanity, and the patient is obliged to wait till the disease has progressed to an advanced degree and the most hopeful period for recovery has passed. This is an injustice which can be prevented by making entrance to an asylum, like that to a general hospital, depend upon the desire of the sick person.

In conclusion, then, we repeat that after an extensive experience with the present law, no great changes are demanded, and that such as are needed should be in the direction of greater ease in gaining entrance to the asylums of the State.

THE RESPONSIBILITY OF THE EXAMINING PHYSICIAN OF
THE INSANE, PARTICULARLY WITH REFERENCE TO
THEIR COMMITMENT TO ASYLUMS.*

BY P. M. WISE, M. D.,

Assistant Physician Willard Asylum for the Insane.

MR. PRESIDENT—I trust it will not be deemed inappropriate if I call your attention, briefly, to a subject that is not purely scientific, but, it appears to me, of sufficient importance for your consideration.

The examination of reputed insane persons with a view to their commitment to lunatic hospitals or asylums, either for treatment or custodial care, or both, is an important function of the practicing physician. He holds, in this respect, a unique and peculiar relation to the community. He exercises not only a purely medical function in the diagnosis of an alien disease, but, in the State of New York, as well as in several neighboring States and in Canada, certifies as well to the propriety of asylum commitment, upon which depends, or to which certificate is appended a judicial approval or order.

My subsequent references will apply to the commitment of the insane in the State of New York by civil process under the

* Read before Alumni Association of Buffalo Medical College, Feb. 27, 1883.

existing statutes. Briefly, then, under this process no person can be committed to a receptacle for the insane except upon the certificate of two physicians, who certify, under oath, to their qualifications as medical examiners, and after a personal examination setting forth the insanity of such person. Upon these certificates alone a subject can be provisionally committed to an asylum pending judicial action, for a period not exceeding five days. It is well to understand that this grant of power constitutes the chief legal responsibility of the examiner. To quote from an opinion of the ex-Commissioner of Lunacy:* "The physician who is permitted to exercise it should remember that, like all legal franchises, he takes it *cum onere*. Hence an action will lie against him for maliciously, and without any reasonable or just cause, signing a certificate that a party was insane and in a state requiring to be confined, in consequence whereof a party had been detained in custody as a lunatic. Or, such certificate might be considered a libel, in which case an indictment would lie against the person signing it. Therefore, our courts have held that it is clearly libelous to publish of another that he is 'insane and a fit person to be sent to the lunatic asylum,' or that 'he is so disordered in his senses as to endanger the persons of other people if left unrestrained, and that it is dangerous to permit him longer to go at large.' The libelous character of such language will not be destroyed or diminished by the fact that the person uttering it is a physician and makes the statement as a professional opinion."

A medical certificate becomes of full force only after receiving the approval of a judge or justice of a court of record; but the responsibility still rests upon the physician who has furnished not only the facts, as observed by himself, but has certified to the propriety of detention in an asylum under the provisions of the statute.

The form of the certificate is prescribed by the Commissioner of Lunacy, and the one in force at the present time is specified in

* Ordranax: "Judicial Aspects of Insanity."

the appendix of the codified lunacy laws of 1874. It is the same schedule that is prescribed by the English lunacy laws, except in one particular to which I shall hereafter refer.

You are undoubtedly familiar with the form of certificate, but I ask your attention to a suggestive review of its requirements: The schedule provides for the name, the residence and the legal qualifications of the examiner; for the statement, under oath, that on a stated day a personal examination of the party named had been made, and following that the opinion that the said party was insane and a proper person for care and treatment under the provisions of the statute. The declaration of insanity is an entirely distinct one from the succeeding statement that the person is a proper one to be detained for care and treatment. This is a question that may at some time require your serious attention; but as the certificate in question is always made with reference to the admission of the patient into an asylum, the examiner must be competent to attest the propriety of such action.

Although it may be negatively held that a person of unsound mind is not, legally, an improper one for admission to an institution specially designed for their care, it must be remembered that in very many cases attesting such an opinion places the examiner in a defensive position, and, in a greater degree than in ordinary professional opinions, he may find it necessary to justify his action afterwards.

In this connection I deem it proper to refer to some of those conditions of insanity in which, as medical advisers of the family of the lunatic, the physician may be called upon to decide as to their future treatment. The propriety of asylum commitment may be submitted to him, or it may be opposed by the family in instances where it appears to him an urgent necessity. The judgment of the physician, however, usually prevails. In this capacity he assumes a responsibility not legal in its character but essentially grave. To illustrate, he may be called to a case of acute mania with delirium that has suddenly developed and has thrown the immediate friends into a state of utmost con-

fusion and despair. They look to the doctor for relief and advice, and he, perhaps with the consciousness of an incapacity to comprehend the requirements of the situation, advises immediate commitment to an asylum. Within a week the patient may die, as he would have done at home or under domestic care, but the doctor's professional acumen has to bear, none the less, the criticism, and sometimes the contumely, of the friends.

On the other hand, his judgment is enlisted in a case of mild progressing mania. The patient may not be a disturbing element in the household, and examination reveals, probably, a delusion of persecution, with perhaps illusions of sight or hearing. There may be strong opposition in the family to removal from home, and the doctor, aware that his decision will govern action in the case, concludes to advise continued residence in the family. Or, what appears to him a mild form of melancholia with depressing apprehensions may not be considered urgent, and he carelessly recommends suspension of action, and the patient continues at home. A tragedy following in either case, would tend towards making the medical adviser feel very uncomfortable, and he would undoubtedly appreciate the responsibility that attends his professional calling at that time as much as at any other in the course of his life.

It may be laid down as a pretty safe rule to follow—not one of course, without frequent exceptions—that cases of acute delirious mania should be retained at home until it is safely conclusive that the attack is not a transient one, and that the patient will survive it. Marcé, a well-known French writer estimates that one out of three or four survive the attack. In this country the mortality is certainly not as great, but it is large and it is well to bear this in mind in making a prognosis that will largely influence the disposal of the patient. And then again, it is well to act slowly in these cases until the diagnosis is settled. The patient may be drunk, in a condition of delirium tremens, or suffering from delirium of acute disease. Moreover, they can be as successfully treated at home if proper care can be given them,

the chief requirement being constant and sufficient personal attention.

I cannot, in such a brief paper refer to the various conditions of insanity requiring asylum care, but I would especially impress upon you that patients with homicidal and suicidal tendencies, as a matter of safety, need the watchful care that is best given them in asylums.

Entirely aside from the question of treatment, it is best to provide the protection of an asylum for a patient with active delusions, particularly if they are delusions of persecution or are of a depressing character and lead to apprehensions or the baser passions. In cases attended by mental depression there should always be a fear of suicide, and where proper vigilance cannot be afforded at home it is the doctor's function, in so far as his counsel will prevail, to see that it is afforded in an asylum. Reproach will be deserved if the physician allows the popular clamor against asylums to influence his counsel in cases that are manifestly dangerous to themselves or others.

Then, again, there are conditions of chronic mania known in the nomenclatural multiplication table as pyro-mania, erotomania, demonomania, nymphomania, etc., that are not harmless conditions, and that require the restriction of liberty given with the least friction in a well-conducted asylum.

Upon the family physician frequently devolves the responsibility of seeing and treating the insane individual in the only curable stage of the disease, and it is an obligation he owes his calling that he either adopt and apply such remedial measures as the case requires, or else inform the friends in no uncertain way that the danger of confirming the insanity lies in the postponement of treatment.

With this digression, I again ask your attention to the legal form of the certificate of insanity. The schedule requires the examiner's opinion, as already stated, but it also requires the reasons or grounds, which should be facts, upon which such opinion is formed. The defective quality of certificates is

usually found in the imperfect narration of facts. It should be plain that the reasons upon which an opinion is based should not be inconsistent with sanity, but should plainly set forth the observed facts that lead the examiner to his opinion, as well as the leading incidents communicated by others that tend to confirm such an opinion.

In the schedule of the British certificate, in that of Ontario and several of the States, the reasons are divided in the form in two parts: 1st. As to facts indicating insanity observed by the examiner. 2d. Other facts (if any), indicating insanity, communicated by others. It is better to state the result of the personal examination of the patient independent of the information derived from other sources, whether such a division is required by the form or not; for testimony of this character is of greater forensic value than vague generalizations. It is usually the only testimony that the judge who approves the certificate has, and it would be reasonable and just were he to demand, in each instance, satisfactory proof of the insanity of the party from the facts observed by the examiner.

I quote the following reasons given in a few of the certificates that have come under my observation, to illustrate the value of such a distinction:

"From a personal examination and the history, I am convinced that he is afflicted with insanity." The examiner merely re-states what he has previously stated in the certificate.

"That his imperfect nervous development assumes a form of maniacal insanity."

"Having been her medical adviser for two years, am well conversant with her condition." It would seem that a two years' acquaintance with the party ought to make the examiner competent to state a few relevant facts.

"Upon a personal examination, and having been acquainted with him for nineteen years."

"I have seen her almost daily for several years, and from the fact that she has been once before in an asylum." It may be a

satisfaction to the court to know of these long acquaintances, but these are surely not facts indicating insanity.

"She has a difficulty of the uterus, a difficulty of the spine in the dorsal region, perhaps organic." The author of this certificate may have presumed there was sufficient peripheral irritation to constitute a case of reflex insanity, but he withholds his theory.

Another examiner certifies in several cases, with marked uniformity, that the fact that grounded his opinion was "Chronic Dementia," whereas, it was a fact, in one of the cases at least, that dementia was the least noticeable symptom.

"That she is in a state characterized by an association of non-related perceptions from inability of the mind to judge and reason."

"Rapidity of the pulse, restlessness, general debility and inconsistent conversation. Thinks he is dangerously sick." The companion certificate, made by a disciple of Hahnemann, was also based upon the ground that the party considered his own case dangerous. As a matter of fact, the patient manifested many symptoms of insanity and expressed delusions of grandeur freely.

Now, as regards facts, whether observed or communicated, there were none at all in the certificates quoted that were inconsistent with the patient being perfectly sane.

When a physician undertakes to examine a person for the purpose of signing a certificate, he has to decide whether the person is or is not of unsound mind. If the latter opinion is reached, he should be able to plainly state the reasons for it.

The examination of insane persons is frequently attended by difficulties, various in kind and degree. In urgent cases of insanity, especially in the acute form, the manifestations of disease are easily recognized, but there are many insane conditions where the indications of a mental disorder are not plainly apparent to the examiner upon a personal examination, and he is, therefore, incompetent to sign a certificate, however well he

may be convinced by the information communicated that the party is insane. In cases of doubtful insanity and so-called "moral insanity," in minds that have left the realm of eccentricity and have drifted over the borderland, but where sufficient mental integrity remains to permit a temporary restraint of the diseased exhibit, the examiner may encounter the greatest difficulties and be seriously baffled. Frequently there are no delusions or hallucinations, but only intellectual defect. The mind, by original organization of the brain, may be deficient and incompetent, and this insufficiency of mental control may increase to such a degree as to render the subject irresponsible for his acts and a proper person for supervision and restraint; but the examiner does not see the insane conduct, as it is only exhibited under commonplace conditions, and they are frequently able to defend their insane acts by creditable arguments. The examiner should be satisfied that the insane action he may observe, is of a persistent and not of a fugitive character, or a transient condition. There are many phases of erratic action, of violent passion and eccentric states of the intellect that would constitute serious forms of insanity, were they persistent and not explained by the environment of the individual.

Before entering upon the personal examination of difficult cases, the examiner should prepare himself with all the presumptive evidences of insanity at his command, and thus be provided with a base for operation, and a starting point. An ingenious introduction of an examination frequently affords the physician opportunities that, by an awkward introduction he would not obtain in many interviews. As a rule, the insane are easily led to talk about their habits of life, and if they have delusions they are usually connected with the practices of every-day life. The examiner must accept the statements of friends in an impartial manner and consider such evidence as merely corroboratory, to be proved by observed facts. It must also be remembered that one symptom of insanity, one insane act, is not enough to prove its existence.

The difficulty of the examiner may arise when he endeavors to define the abnormal characteristics of these perplexing cases upon his certificate as grounds for his opinion; to draw from obscurity to plain description his consciousness of the morbid condition. It may be his sad experience to support the views expressed in his certificate on the witness stand, for it is these very cases that furnish the material for courts.

And now, gentlemen, in closing this brief and imperfect treatment of so important a subject I desire to express the hope, which I am sure is equally shared by you, that our alma mater may continue to advance her standard of excellence; and that she may add to the ably-filled chair on insanity some opportunities for the clinical teaching of this important department of medicine. It is but a few years since the study of mental disease has been added to the curriculum of any American school, and we may well feel proud of our foster-mother that she holds her position in the advance column. May we not hope that she will perfect the good work so auspiciously begun in this direction by adding a clinic in psychiatry.

HEMORRHAGE FROM THE NAVEL AFTER DETACHMENT OF THE FUNIS.*

BY U. C. LYNDE, M. D., Buffalo, N. Y.

The cord is usually detached after the lapse of five or six days from the birth of the child. Hemorrhage from the stump is uncommon; but when it occurs, it is fatal, unless checked by surgical means. We are not now considering those cases in which there is but a mere oozing of blood, but those only from which there is an actual flow of blood. Most practitioners of large obstetrical experience have met with cases that have proven fatal, notwithstanding all their efforts to arrest the hemorrhage. This hemorrhage takes place from the umbilical arteries, and, owing to the soft and yielding parts beneath, com-

* Read before the Buffalo Medical Union.

presses are of no avail. Collodion, astringents, styptics, escharotics, have all been tried in vain. Some of these deceive the practitioner by temporarily checking or arresting the hemorrhage which returns in his absence and proves fatal to his patient. Dr. Gross recommends the twisted suture; but, the conformation and tenderness of the parts, together with the susceptibility of the patient, render this method objectionable. Dr. Francis Minot, of Boston, gives us, as reported by Dr. Gross, a published list of forty-six cases, in which thirty-nine proved fatal. This list probably includes some cases of mere oozing of blood. Dr. Gross mentions four fatal cases in his own practice. He does not tell us how many he has had. Having lost my first patient, after resorting to the usual means for arresting hemorrhage at this site, I resolved that if ever I had another, I would not hesitate to use such means as would ensure the life of my patient as against hemorrhage, at least. My next patient had bled until it was about as white as a sheet when I first saw it. After arming a straight, round needle, having a large eye, with surgeons silk as large as could be drawn through it, my patient was placed upon a pillow, on his back, upon a table, and chloroform administered. A common tenaculum was inserted as close to the stump as practicable, at the apex of the inverted hollow cone, and, by gentle traction, this cone or cup was inverted, its apex being made convex and pointing toward the operator; and, at the same time being made to rise above the level of the surrounding surface of the abdomen. The needle was now made to transfix the stump from which the funis had been detached, care being taken not to dip deep enough to wound the peritoneum. The double ligature was cut, leaving both ends long enough to tie conveniently. Again the stump was transfixed; this time at right angles to the first, and the threads cut off as before. The threads were carefully separated and tied so as to include the entire stump, but tied only tight enough to stop the hemorrhage, and *not* tight enough to strangulate the parts that were included. The ends of the ligatures were now cut close to the

knots, the tenaculum removed, and the parts allowed to resume their normal position, that of a hollow cone with the apex pointing toward the abdominal viscera. After a few days the thread was cut and drawn out, no hemorrhage followed and my little patient survived and is now almost a man. Since then I have operated on two cases with like results. In making this little operation the *size* of the thread and the *kind of needle* used are important. The *inversion* of the *hollow cone* and the *transfixion* of the *stump* are to be carefully performed. Tying the ligatures is a matter more of observation than of sensation, as the entire cessation of the hemorrhage is the surgeon's guide, unless holding the parts with the tenaculum has so checked the bleeding as to destroy this means of judging, and then the surgeon must judge as best he can of the force he uses by the sensation upon his fingers.

Foreign Correspondence.

LONDON, March 10, 1883.

DEAR JOURNAL—In my last letter I gave you some account of the great hospitals of Philadelphia, and to-day I write you from "wonderful London;" truly wonderful, indeed, not only for its vastness, its magnificence and historic interest, but also for its public charities, which are commensurate with the greatness of the city. Hospitals, dispensaries, asylums, provident homes, orphanages, etc., are to be seen in every quarter of the city, and the voluntary subscriptions, donations and bequests to these institutions yearly often exceeds twenty million dollars. Most of the hospitals are free and bear conspicuously upon their walls the inscription: "Supported by Voluntary Contributions only." That there may be no lack of opportunity to give, and also, perhaps, to take advantage of the natural impulse which most of us felt when passing the outstretched hand of a beggar, most of them have fixed in closest proximity to the crowded

streets a board, inscribed, "For the Support of the Hospital," around an inviting-looking aperture for coins, which are, when thus introduced, conveyed by a tin tube into the basement of the building. I am informed that a considerable revenue is derived from these "catch-pennies."

The great general hospitals, which have medical schools attached to them, are, The London, St. Bartholomew's, Guy's, Charing Cross, Middlesex, St. George's, University, King's, Westminster, St. Mary's and St. Thomas. The last named, although not the largest, far surpasses all the others in the beauty and fitness of the buildings. Indeed, there is probably no hospital in the world which, in architectural grandeur and beauty of location, can compare with it. It is approached from "the city" by the handsome Westminster bridge, the view from which is said to have suggested Wordsworth's fine sonnet, beginning: "Earth has not anything to show more fair." On one side of the river are the magnificent Parliament buildings. Opposed to them stands the hospital. It consists of eight fine buildings, in red brick, faced with stone, and united by arcades. The whole presents a river front of over 2,000 feet. These buildings were completed in 1871 at a cost of nearly two and a half millions. The existence of the hospital, however, dates back to 1215. The wards contain 600 beds and occupy the second, third and fourth stories of the buildings, the construction of which ensures complete ventilation and an abundance of light and air. Outside the main building, on the first floor, is an extensive and well-arranged out-patient department. Here the attendance of patients, including medical and surgical cases, are about 70,000 annually.

The buildings for the medical school stand at the southern extremity of the hospital, from which they are quite isolated. They contain ample accommodations for a large class of students. The dissecting rooms, and laboratories for practical physiology and chemistry are large and well appointed, and every day post mortems are made in a large hall specially constructed for the purpose.

The museum is one of the finest in the city and contains nearly all the specimens described and figured in Sir Astley Cooper's works, who was a diligent, and one of the earliest, contributors to its collection.

The pathological division alone contains over 3,000 specimens, and all are conveniently catalogued in printed volumes. Unlike most of our museums, nothing is under lock and key. The student can handle and study each specimen to his hearts content. There is also a *materia medica* museum, containing 600 specimens of medicinal plants, very beautifully mounted. A large reading room and library for the use of the students is constantly open and is plainly well used and enjoyed.

The faculty embraces some noted men, chief among them Bristowe, whose excellent work on "Practice" is so highly appreciated in America. I have attended some of his clinical lectures and accompanied him in his ward visits. Personally he is a man of fine presence, with a strikingly handsome and intellectual face, and courteous and gentle manners. He speaks with much fluency and without notes in rather a low but clear voice and with rapidity. Indeed, quickness is a characteristic of the man, as evidenced in every movement. In his examination of his patients he is very thorough, but gentle. His service is three times a week and extends, when I have been with him, at least from 1.30 to 5 P. M. There are a great many interesting cases in his wards. One of typhus interested me as the first I had ever seen. Bristowe states that it is here not very infrequent. At longer or shorter intervals there are outbreaks of the disease, originating mainly in the over-crowded parts of the city. Two cases of "floating kidney," both patients female and in both the right kidney implicated. He says that mobility of the kidney is much more common in women than in men, and on the right more frequently than on the left side.

I send you herewith a report of a case which may be interesting to your many readers, and in which Dr. Bristowe's diagnosis was completely confirmed by the post mortem. He predicted that a tumor would be found in the cerebellum.

W. F., aged 10; male; admitted December 12, 1882. Had been suffering for six months from headache, and vomiting three and four times a day. Complains of inability to open his eyes, and when that is over, some dimness of vision. He is a healthy-looking boy, with pain in the forehead varying in intensity. He is able to count fingers and read correctly. Pupils react to light and accommodation; no strabismus; well marked double optic neuritic. Hears, tastes and smells well; no facial paralysis. Can walk and feed himself; sensation normal; superficial reflexes normal. Heart and lungs healthy; abdomen natural. Sleeps well; no tremors.

14th. No headache; no vomiting.

16th. Still free from symptoms.

18th. Much pain in head; no vomiting. For the next ten days he continued to have more or less headache; no other symptom.

28th. Sight noticed to be defective; pain in occiput.

January 2, 1883. Sight seems to go for a few minutes and then return again.

24th. Almost completely blind, but gets up and finds his way about and seems quite sensible.

26th. Gradually increasing intervals of torpor; no sickness since admission.

February 6th. Much pain; pupils widely dilated; vomiting.

9th. Giddiness on standing first noticed.

13th. Cannot stand owing to the giddiness.

16th. Lies in a state of coma.

20th. Pain controlled by morphia. Vomits, if moved.

26th. Pain very intense; patient moaning and writhing about the bed.

27th. Much better; no pain or sickness; still giddy if he sits up.

March 4th. Had a kind of fit; head was retracted; both legs and left arm rigid; moaned, if touched; fit lasted 10 minutes; pulse almost stopped; 30 beats counted in one minute.

After this he had several more fits of the same kind, and on March 8th, at 1 A. M., 2 minims of morphia were injected subcutaneously. An hour later his breathing stopped, but the heart continued to act vigorously. Artificial respiration, with stimulant injections and enemata, kept him alive for $8\frac{1}{2}$ hours longer, then the body became quite cold and the heart gradually stopped.

POST MORTEM.

Surface of convolutions, flattened; surface of brain, dry; skin, full of blood; general surface, very pale. On removing brain, the lamina terminalis and infundibulum both formed convex projections and were transparent, owing to fluid in ventricles. Both lobes of cerebellum were adherent to dura mater, and embedded in the posterior part of each lateral lobe, at about one inch from median line, was an irregular, rounded, tubercular mass, each about the size of a chestnut; the ventricles greatly distended with fluid; including, also, the third ventricle and the "iter a tertio"; brain firm and healthy in other respects; base of infundibulum formed a thick ring around the optic commissure, and the adjoining portions of optic tracts were stretched; no tubercle in membranes of brain.

The distance between the hospitals is, to a certain extent, a hindrance to good work here; but, by devoting certain days to a particular hospital, or group of hospitals, one can employ all the working hours of a day to advantage. As for material, the amount of it is something astonishing. An attendance at the service of any one of the prominent men here will occupy from two to three hours, and one may choose almost any department of medicine and find an unlimited number of cases to illustrate it.

A. R. D.

Selections.

CHANGES OF UTERINE MUSCULAR TISSUE AFTER PARTURITION.

Prof. Wojtschechowsky has examined, microscopically, ten uteri, removed from women who died within thirty-five days post partum. He offers the following as the result of his investigations:

1. The fatty degeneration of the uterine muscular tissue, upon which the diminution in size of the uterus depends, begins immediately after parturition, and covers a period of more than five weeks.
 2. The degeneration attacks alike all parts of the organ (fundus, corpus and collum).
 3. It could not be ascertained whether the process began at an earlier period in the outer or inner muscular layer of the uterus.
 4. The interstitial tissue of the uterus does not take an active part in the process of involution.
 5. The process of obliteration of the blood vessels covers a greater period than the entire involution.
 6. The appearance of free pigment in the uterus is not stationary.—*Deutsche Med. Zeit.*
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Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Regular Meeting, March 6th, 1883.

Vice-President Dr. John Cronyn in the Chair. Dr. C. M. Daniels, Secretary.

Present—Drs. Fell, Dayton, Bartlett, Peterson, Harvey, Clark, Mann, Howe, C. A. Ring, Fowler, Burghardt, Runner, Potter,

Brecht, and by invitation, Drs. Hayd, F. H. Potter and Tryon.

Essay—By Dr. Julius Pohlman; Subject, "Geology in Sanitary Science." After referring to the various specialties in medicine and of the specialists in naturally finding the cause of disease in each of their several departments, he especially referred to "geology," his favorite study, and of its importance in relation to the laws of health, and gave a very clear and comprehensive explanation of Buffalo and its situation in a sanitary point of view, and in detail especially dwelt upon the unhealthfulness of the eastern portions of the city, where the soil is an almost impervious clay and where sewers are wanting, and the people built their houses over stagnant water and live in utter disregard to drainage or surroundings. He thought it too late to try and educate the people to observe the necessities for drainage, as they were becoming accustomed to the present condition of things and would make no effort for their own relief. Compulsion only would avail, together with a proper system of general sewerage.

Discussion—Dr. Bartlett thought that the essayist did not understate the facts, especially regarding the conditions under many of the houses, and thought the builders themselves should give more attention to the matter. Related a case where he was asked to see a family where five persons died from typhoid fever. Examination of the premises discovered a considerable quantity of stagnant water under the house, and the warm rooms above naturally drew the poisonous emanations up through them. He wished the law could be made to force the necessary sanitary requirements.

Dr. Hayd thought that the facts placed before the association were such that the physicians should urge the authorities to take them up, and that it fully illustrated that many diseases were caused or promoted by the bad sanitary arrangements; also, that the paper should be published for the benefit of the public.

Dr. Howe testified to his appreciation of the subject, but thought we should be guarded in regard to certainty in ascribing the effect to an apparent cause, for sometimes the most perfect types of health came from some of the poorest dwellings. As to the health department, he thought its powers had recently been improved.

Dr. C. A. Ring asked regarding the drainage in the vicinity of the almshouse, its natural direction, etc.

Dr. Pohlman replied that it was south towards the city, but that he could not advise an effort to force it in that direction, although, no doubt, a large portion flows down into the earth through many of the deep fissures in the rocks before reaching the city itself.

Dr. Fell remarked that papers of this character should come more frequently before the association, and not allowed to die out as soon as read, and thought the Board of Health should be given greater powers; also spoke of the fallacy of supposing that water which is clear and cold is necessarily pure, and related a case where water which seemed of the best came from direct sewer contamination. In speaking of the low clay soil in the fifth ward, as referred to by the essayist, he said in summer it was doing injustice to the "Hamburg canal," to invite the comparison. As to the action of the authorities in doing away with the wells, he thought it a wise and proper act. As to the necessity for sewers at East Buffalo, he thought the city should build them at once.

Dr. Fowler spoke of the mortality in the fifth ward, as taken by himself some years ago, and although the ward contained nearly one-fourth of the total population of Buffalo, the death-rate at that time did not exceed that of any other portion of the city.

Dr. Clark thought the subject one of great importance and that it was of great interest to the public, and seconded Dr. Hayd in recommending that the paper be published.

Dr. Bartlett, referring to Dr. Fowler's statistics, thought that at the time there might have been what would be a standing center of disease outside of the fifth ward, thereby affecting the comparison.

Dr. Fowler replied that the statistics taken covered a period of twenty-seven months.

Dr. Cronyn said that the association and community could not help but thank the essayist for his able and timely paper upon a subject of the greatest importance to all. It was easy to tell the people they were sick because of the cesspool near by in the shape of wells, etc. He had preached it in Buffalo for twenty-three years and insisted that well water should not be used. He considered the paper the best and most important one he had heard upon the subject.

Dr. Fowler moved a vote of thanks be tendered Dr. Pohlman. Carried.

Voluntary Communications—Dr. Howe presented a picture of typical form of strumous diathesis.

Dr. Mann presented a sack of an ovarian cyst, removed during the day, the tumor weighing sixty pounds, and stated that the ordinary weight of the woman was but ninety pounds.

Prevailing Diseases—Dr. Bartlett reported pneumonia and a peculiar form of modified influenza, which seemed, to a certain extent, to be transmissible; very little diphtheria, also scarlet fever, not especially severe. Dr. Fowler had observed that which Dr. Bartlett reported; also some evidences of broncho-pneumonia. Dr. Brecht some diphtheria.

Miscellaneous Business—Dr. Mann announced that the new Medical Library Association was quartered with Dr. Samo, corner of Pearl and Chippewa streets, and stated that the library of the Erie County Medical Society was also there, and that a large number of journals and periodicals were now on file and the library open from two until ten o'clock P. M. daily.

Adjourned.

CLAYTON M. DANIELS, *Secretary*.

Editorial.

THE DISCUSSION OF ETHICS.

The ball has been fully set in motion in the discussion which has been opened in relation to the new code of ethics, adopted by the State Medical Society in 1882, and re-affirmed at its last meeting. The medical press of the State have, until the present time, intentionally ignored the subject from motives of respect, not only to the profession at large, but to the State Society and the American Medical Association, which have been placed in antagonism thereby.

In a late number of the *New York Medical Journal*, an introductory article on "Medical Ethics and Etiquette," from the pen of Dr. Flint Senior, is issued, in which the distinguished writer, in that and successive numbers of that journal, proposes to discuss the code of ethics adopted by the American Medical Association, with commentaries. Following is published the paper on medical ethics, presented to the State Society at its last meeting by Dr. H. R. Hopkins, of this city. The widely distant standpoints from which ethical questions are discussed by these two writers are fair exponents of the diversified opinions held by members of the profession in our own State, and we presume the same diversity of sentiment prevails elsewhere.

Among the objects of the code of ethics is the regulation of the duties of physicians to each other and to the profession at large. Have we not, however, in our zeal to guard the sacred rights of this monopoly in medicine, which we style the regular profession, rather lost sight of the great interests and rights of the public? We recognize that there may be need of some rules or regulations or laws in relation to the medical profession, and we think that Dr. Worthington Hooker, chairman of the committee on medical education, in his report to the American Medical Association, freely quoted in Dr. Hopkins' paper, hits the nail

upon the head when he says that the object of these laws is "to give protection to those *measures* which are calculated to secure to the *community* a well-educated body of physicians." Not much stress is laid here upon the duties of physicians to each other and to the profession at large. The greater duty is to the public. This is a broad position, worthy of the profession and of the representative body before which it was presented, and from which it received an unanimous endorsement.

A code of ethics should be framed upon the principle that the public have rights which the profession are bound to respect; that it is our first duty to present a well-educated and thoroughly trained body of medical men with the greatest latitude in reference to opinions. We must also recognize that until the ranks of the profession are purged of much of the dross which now drags it down to the level of a trade, we cannot afford to criticise our neighbors whom we style irregulars for the lamentable spectacle they present of ignorance, quackery and charlatanry, from the charge of which we ourselves are not altogether innocent.

The logic of events has convinced the younger members of the profession that it is better to have no code than one based upon a foundation which time has undermined, because it failed to fully estimate other rights and prerogatives than those peculiar to medicine alone; and we are inclined to the opinion that our young medical men have caught the spirit and genius of our institutions and have tried to conform therewith a code of ethics which will incorporate, primarily, our duty to the public, and secondarily, our duty to each other. The picture is thus reversed, and we think improved, because it presents a broader outline, on which the responsible duties of the profession can be more clearly portrayed.

The abrogation of the old code has not disturbed our equanimity in the least, for the simple reason that we acknowledge the right of a gentleman, either in or out of the profession, to associate with whom he pleases, and we have not coveted the privilege to trespass beyond the border line of the medical creed

in which we were indoctrinated in our pupilage. But we have long since felt that the old code belonged to the past, and we believe that the medical profession should consist of a body of educated and cultivated gentlemen, who would be governed on all ethical questions by those principles of genuine politeness and courtesy observed in refined and cultivated social circles. There is, therefore, an appropriateness to the title, "The Gentleman's Code," given to this late movement in our State Society; and we estimate the medical profession of the Empire State so highly that we think such a code will accord with their instincts and their education.

AN ACT TO REGULATE THE LICENSING OF PRACTITIONERS OF
PHYSIC OR SURGERY.

We are able to present our readers the act proposed by the Committee on Legislation of the State Medical Society, which it is intended to present to the legislature. In our last number we urged the importance of this matter with a view to the general interests of the profession and the public. The following act covers the ground very fully, and, with some slight modifications, will receive the endorsement of the profession. We invite our readers carefully to peruse it.

The People of the State of New York represented in Senate and Assembly do enact as follows:

SEC. I.—The Regents of the University of the State of New York shall appoint as many State boards of examiners in medicine as they shall deem necessary, the membership of one or more of which boards shall represent either one of the several systems of medical practice recognized by the incorporated State medical societies of this State, each board to consist of not less than nine members, who shall be legally authorized practitioners of physic or surgery in this State; and all persons desiring to practice physic or surgery after November first, eighteen hundred and eighty-three, must comply with the pro-

visions hereinafter prescribed, and obtain the license hereinafter provided before entering upon the practice of physic or surgery in this State.

SEC. II.—Such examiners shall faithfully examine all candidates referred to them for that purpose by the Chancellor of said University and furnish him a detailed report in writing of all of the questions and answers of each examination, together with a separate written opinion of each examiner as to the qualifications and merits of the candidate in each case.

SEC. III.—Such examination, upon questions furnished by the Regents of the University of the State of New York, shall be in Anatomy, Physiology, Histology, Pathology, Theory and Practice of Medicine, Chemistry, Surgery, Obstetrics, Materia Medica and Therapeutics, and such other branches in the several departments of medical science as may be required from time to time by the said Regents.

SEC. IV.—The said reports of the examinations shall forever be a part of the public records of said University, and the orders of the Chancellor addressed to the examiners together with the action of the Regents in each case shall accompany the same.

SEC. V.—Any person on paying not less than twenty-five dollars into the treasury of the University, and on applying to the Chancellor for the aforesaid examination, shall receive an order addressed to one of the aforesaid boards of examiners, instructing it to examine the candidate at one of the regular semi-annual examinations, provided that proof satisfactory to the Chancellor is first given, that the candidate is over twenty-one years of age, of good moral character, and has received a diploma issued to him or her and conferring upon him or her the degree of Doctor of Medicine from some legally incorporated Medical College.

SEC. VI.—The Regents of the University, after finding that not less than three-fourths of the members of one of said boards have voted in favor of a candidate, and that said examination has been a satisfactory test of the qualifications of said candidate,

shall issue to him or her a license to practice physic or surgery in the State of New York, for which license the candidate shall pay to the University the further sum of not less than fifteen dollars.

SEC. VII.—The moneys paid to the University under the provisions of this act shall be appropriated by said Regents for defraying the expenses incurred by reason of the provisions of this act.

SEC. VIII.—The Regents shall establish such rules and regulations as they may deem necessary to insure the faithful execution of this act.

SEC. IX.—Every person (excepting such as have heretofore lawfully registered pursuant to the laws of the State in force at the time) complying with Sections V and VI of this act, shall, before commencing to practice physic or surgery, register in the clerk's office in the county where he or she practices or intends to practice physic or surgery, in a book to be kept by the said clerk, his or her name, residence, and place and date of birth, together with the date of his or her diploma, and by what institution granted, together with his or her license to practice physic or surgery within this State; at the same time the person so registering shall exhibit both the license and the diploma herein required to the clerk, and subscribe and verify by oath or affirmation before a person duly qualified to administer oaths under the laws of this State, an affidavit containing a plain statement of all of the facts as aforesaid, including his or her age, and shall file said affidavit and copy of said diploma with said clerk; said county clerk to receive a fee of twenty-five cents for such registration, payable by the person so registering. Nothing in this section shall be so construed to prohibit medical consultations in the different counties of this State between legally qualified and registered physicians of this and neighboring States.

SEC. X.—A person who shall willfully swear falsely to any statement contained in the affidavit required by the ninth section of this act, shall be deemed guilty of and subject to conviction

and punishment for perjury, and a person who violates any of the other provisions of this act, or who shall practice physic or surgery under cover of a diploma unlawfully issued or illegally obtained or without a license as provided for in this act, shall be deemed to be guilty of a misdemeanor, and on conviction thereof shall be punished by a fine of not less than two hundred and fifty dollars, nor more than five hundred dollars for the first offense, and for each subsequent offense by a fine as aforesaid and by imprisonment for not less than thirty days and not more than six months. The fine, when collected, shall be paid, one-half to the person or the corporation making the complaint, the other half into the county treasury.

SEC. XI.—For the purpose of this act the words practice physic or surgery, shall mean to annex the letters M. D. to one's name, or to suggest, recommend, or prescribe, direct or employ, as a matter of business or for a fee, for the use of any person any drug, medicine, appliance, apparatus, or other agency, whether material or not material, for the treatment, cure, relief or palliation of any real or supposed ailment or disease of the mind or body, or for the treatment, cure, relief, of any wound, fracture, or other bodily injury or infirmity or any deformity.

SEC. XII.—Nothing in this act shall apply to commissioned medical officers of the United States Army or Navy, or of the United States Marine Hospital service during the term of their service as such, nor to any of the members of the House Staff of any legally incorporated Hospital during the term of service in the said Hospital.

SEC. XIII.—So much of chapter seven hundred and forty-six, laws of eighteen hundred and seventy-two; chapter five hundred and thirteen, of laws of eighteen hundred and eighty; chapters eighty-six and six hundred and seventy nine, laws of eighteen hundred and eighty-one, and all other acts and parts of acts inconsistent with this act are hereby repealed.

SEC. XIV.—This act shall take effect November first, eighteen hundred and eighty-three.

OBITUARY.

Died at Belfast, N. Y., February 24, 1883, John H. Saunders, M. D., aged 63 years.

Dr. Saunders was a delegate at the last meeting of the State Medical Society, and from undue exertion and exposure fell a victim to typhoid pneumonia. He was held in high esteem in the section in which he practiced, and was widely known as a highly educated and skillful physician. The profession, of which he was an earnest member, and the community to which he devoted the best energies of mind and body, feel the loss they have sustained in the death of this estimable gentleman and conscientious practitioner.

EDITORIAL NOTES.

THE Association of American Medical Editors will hold its next meeting in the city of Cleveland, simultaneously with that of the American Medical Association, June 5th and 6th, 1883. The address will be delivered by Dr. N. S. Davis, of Chicago, on "The Present Status and Tendencies of the Medical Profession and Medical Journalism." Dr. J. V. Shoemaker, the able Secretary, has issued the call, and we hope to be able to attend.

THE *Journal of Nervous and Mental Diseases*, published by G. P. Putnam's Sons, and edited by W. J. Morton, M. D., is among the most valuable of our exchanges, as it is the most complete and able of the medical periodicals in the special department to which it is devoted. To those of our readers who desire the best thoughts of our ablest neurologists, we recommend this journal. Its appearance in type and paper corresponds with all the publications issued by the enterprising publishers.

WE have received, through the kindness of Dr. Fell, of the Committee on Publication, a copy of the Proceedings of the American Society of Microscopists, at its fifth annual meeting, which was held

August 15, 1882, at Elmira, N. Y. It is printed on fine tinted paper and contains 292 pages of valuable matter, presented in a form which is highly creditable to the society. The publishers are Messrs. Bigelow Brothers, of this city, and the typographical execution of the work reflects much credit upon their taste. There is a great variety of subjects included in the work, many of them being of professional interest. We notice a very interesting paper by Dr. Holbrook on the Termination of the Nerves in the Liver; a paper by Dr. Ephraim Cutler on the Vegetable Nature of Croup; while many other of the papers show great labor in the special field of microscopy to which the meeting was principally devoted. The proceedings are a valuable addition to the literature of this interesting department of scientific research, and we are gratified to notice this evidence of proficiency of which the present volume is a highly creditable expression.

WE have been favored with a copy of the *Bulletin* of the Buffalo Naturalists' Field Club, published under the editorial management of Professors Kellicott and Fish and Mrs. Dr. Moody. The object of this periodical is to publish brief résumés of general papers read at the winter meetings of the club, with short, original papers or memoirs on all branches of natural science, and particularly notes on the occurrence and habits of local plants and animals. The *Bulletin* contains a list of members of the club, with a brief history of the organization, the Constitution and By-laws, and several very interesting papers. We notice with pleasure a paper on the "Nesting Habits of Birds," by E. E. Fish, of this city, who finds delightful recreation from school-work in watching the habits of birds. Prof. Kellicott gives a very readable paper, entitled "Notes on Protozoa." The dissemination of plants is treated pleasantly by Miss Edna M. Procter. Mr. John F. Cowell treats of "Adventives at East Buffalo, and Miss Annie W. McMillan of the "Ornamental Features of our Trees and Shrubs," while Prof. Linden discusses the "Field Club Work of Western New York." Botanical, entomological and geological notes complete the number. The paper and type are excellent, and the *Bulletin* commands respect not only from its appearance but by the value and interest of its contents.

Reviews.

The Systematic Treatment of Nerve Prostration and Hysteria. By W. S. PLAYFAIR, M. D., F. R. C. P., Professor of Obstetric Medicine in King's College, etc. Philadelphia: Henry C. Lea's Son & Co. 1883.

Dr. Playfair aims, in this little work, to illustrate the system introduced to the notice of the profession by Dr. Weir Mitchell in the treatment of nerve-tire connected with uterine disease. The influence of rest and seclusion, massage, electricity, diet and regimen are very clearly illustrated in the report of cases of this type of disease. The book is exceedingly readable, and is deserving of the attention of the profession.

Transactions of the Medical Society of the State of Pennsylvania at its Thirty-third Annual Session, held at Titusville, May 10th, 11th and 12th, 1882. Volume xiv. Published by the Society. Philadelphia: Times Printing House. 1882.

The typographical execution of this volume is creditable to the society, and there is an amount of valuable professional work recorded within its pages which should not lie buried from the sight and observation of the profession. The papers and addresses are able contributions, making the volume a highly creditable addition to the archives of the society and also to the library of its members.

The Physician Himself and What He Should Add to his Scientific Acquirements. By D. W. CATHELL, M. D. Third edition, Baltimore: Cushings & Bailey, 262 W. Baltimore Street. 1883.

The third edition of this work, following so soon after its predecessor, shows that Dr. Cathell has touched a vein of sympathy and truth among his professional brethren, from which flows a generous appreciation of his labors. The work aims to give to the young practitioner, just starting in his professional career, advice on personal questions in medical practice, in contradistinction to the strictly scientific attainments, which, it is supposed, he has acquired in the completion of the college

curriculum. The book is replete with the most sensible thoughts and advice, and meets a want which every young physician must feel in the early years of his practice. We have been much interested in its perusal, and the favorable review of the second edition, which appeared in the JOURNAL, is more than justified in the more ample discussion of certain important questions in the present edition.

A Treatise on Fractures. By LEWIS A. STIMSON, B. A., M. D., Professor of Surgical Pathology in the Medical Faculty of the University of New York; Attending Surgeon to the Bellevue and Presbyterian Hospitals, New York. With 360 illustrations. Philadelphia: H. C. Lea's Son & Co. 1883. Octavo, 600 pages. Price, \$4.75.

This book is offered to the profession on its merits without a preface, the usual apology from the author for venturing to appear in print. After a careful examination of it we are able to heartily congratulate the author on the success of his work. It is indeed a valuable and comprehensive addition to the surgical literature of the profession. We predict that it will take rank as one of the best treatises on fractures in the English language. The author is fortunate in the selection of his publisher. The engravings are new; and, like all of H. C. Lea's books, the press-work is excellent and the volume comes out in a handsome and substantial dress.

A Manual of Chemical Analysis as Applied to the Examination of Medicinal Chemicals. A guide for the determination of their identity and quality, and for the detection of impurities and adulteration. For the use of pharmacists, physicians, druggists, manufacturing chemists and pharmaceutical and medical students. Third edition, thoroughly revised and greatly enlarged. By FREDERICK HOFFMAN, A. M., Ph. D., Public Analyst to the State of New York, and FREDERICK B. POWER, Ph. D., Professor of Chemistry in the Philadelphia College of Pharmacy. Philadelphia: Henry C. Lea's Son & Co. 1883.

The object of this excellent work is specifically stated in its title, and will be at once recognized as a valuable addition to our medical literature. At a time when the preparation of many

of the medicinal agents is monopolized by parties who make a commercial commodity of valuable remedies, and of whose responsibility there is some reason to doubt, it is important that our druggists and pharmacutists should have facilities at hand to assure themselves of the reliability of the agents they dispense. This work aims to be such a guide, and its publication will be hailed with pleasure by every druggist and practitioner who may desire *purity* in drugs, rather than *cheapness*. Part first of the work is devoted to an explanation of the operations involved in the application of simple tests and chemical examinations, designed to familiarize the student and inexperienced operator with the more important of the simple operations of the pharmaceutical laboratory, also a list of reagents and test solutions and a very concise course in qualitative and volumetric analysis, together with the general characters and the methods for the separation and recognition of some of the principal alkaloids and their allied principles. Part second includes medicinal chemicals and their preparation, their physical and chemical characteristics, with directions for the examination of their quality and purity, and for their quantitative estimation. From this brief outline it will be seen that the publication of the work supplies a want felt by the profession to be necessary and claims a hearty endorsement. Measures that will facilitate the analysis of drugs, with a view to secure greater purity and reliability, are needed. The medical profession deeply feel this need. There is an increasing skepticism in regard to the preparations thrown upon the market by manufacturers, and urged by agents upon the notice of physicians. We commend, therefore, a work which affords our pharmacutists and druggists the needed information and also a guide for the analysis of the agents they daily dispense.

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GANGRENE OF THE LEG, THE RESULT OF INJURY—FRACTURES
OF THE FEMUR—HEMORRHOIDS, TREATMENT BY LIGATURE.

A CLINICAL LECTURE DELIVERED AT THE HOSPITAL OF THE UNI-
VERSITY OF PENNSYLVANIA, DECEMBER 2, 1882.

BY JOHN ASHHURST, JR., M. D.,

Professor of Clinical Surgery in the University of Pennsylvania.

REPORTED FOR THE "BUFFALO MEDICAL AND SURGICAL JOURNAL,"

BY WILLIAM H. MORRISON, M. D.

GENTLEMEN—This patient was admitted on Wednesday night; he had been injured some two or three weeks previously by a pile of lumber falling upon his left leg. For some time after the accident, the patient was treated at his home and did well. He was treated by irrigation, which is an excellent mode in cases of contused wounds. After a number of days had elapsed, the part began to swell, and the swelling extended high up the thigh, even more than it does at present. Spots began to appear on different parts of the leg, and soon the foot and the lower portion of the leg fell into a condition of moist gangrene. You see there the appearance of the limb. We have not been able to positively diagnose the existence of a fracture.

As you probably know, there are different forms of gangrene. The most important division is into dry and moist gangrene. Considerable confusion sometimes exists in the minds of students as regards these varieties and as regards their causes. The difference between dry and moist gangrene is simply this: In dry gangrene the death of the part takes place slowly. We see this form in old age from structural changes in the vessels, and as a result of thrombosis and embolism, or of injury, causing obstruction of an artery while the veins are unaffected. The blood is carried from the part by the veins, but owing to the obstruction of the artery, fresh blood cannot enter it and the part dies from want of nutriment. On the other hand, when the death of the part occurs suddenly, as from a violent injury or anything causing obstruction to the venous circulation, moist gangrene occurs. There may at the same time, of course, be obstruction of the arteries.

We have made free incisions, as you see, in different parts of the limb, to allow the escape of the fluids and prevent the spread of the gangrene. I think that we have succeeded. This separation of the cuticle is a characteristic of gangrene, and it is a point which you will sometimes find of service in distinguishing between gangrene and the discoloration resulting from a bruise. In gangrene the cuticle moves freely on the tissues beneath.

We can now see on the leg a line between the dead and living part. That is not the line of separation, but of demarcation. The line of demarcation simply shows where the gangrene has stopped; it marks off the living from the dead. The line of separation does not form until a later period. It is a line of granulations, not, as is sometimes said, a line of ulcerations. The dead part is, as it were, pushed off by the restorative process of granulation; just as in the case of bone the sequestrum is pushed away from the living bone by the granulations. When the line of separation forms, that is when we see a line of granulations coming up between the living and dead parts, we shall feel that an operation is justifiable. As a rule, it is not proper

to operate in cases of gangrene until this line is well formed. But there are exceptions to this, as to most other rules. In certain forms of gangrene you are not only justified, but required to operate at an early period. In cases of what is termed acute traumatic gangrene, you are required to operate at a comparatively early period. This may occur after compound fractures, or after severe lacerated wounds. The worst case that I ever saw occurred in a lion-tamer, who had been torn by the beast with which he was experimenting. Acute traumatic gangrene set in, causing death in less than 24 hours.

When this patient was brought to the hospital, the history was that the gangrene had come on slowly, and that the swelling, which extended some distance above the thigh, was decreasing. This was favorable. Watching the case, we found that there was no disposition for the gangrene to spread. We were, therefore, justified in waiting. It would not have been proper to operate; in the first place, because we should not have known at what point it would have been safe to amputate in order to remove all of the part that would eventually die; and in the second place, the violence inflicted by the operation would have tended to increase the risk of gangrene, and we should, in all probability, have had sloughing of the flaps. In these cases the rule is to wait until nature points out where the gangrene is to stop.

If, however, we had found that the gangrene was spreading, we should not have had any right to wait. If it had gotten above the knee in 24 hours, it would probably have gone on until it had reached the trunk, and would have been followed by a fatal result; for, when this form of gangrene reaches the trunk, death occurs almost immediately. We had a case of that kind in the hospital a few months ago. A man had received a severe contusion of the arm, accompanied by a fracture of one of the condyles of the humerus; the arm was greatly bruised. He was treated by irrigation and the case did well for some time, but suddenly he began to complain of violent pain in the arm,

blebs began to form and gangrenous spots appeared on the limb. I made free incisions, hoping to prevent the spread of the gangrene. Being compelled to leave the city, I requested Dr. H. R. Wharton to see the case in the evening. At that time he found that the gangrene was spreading so rapidly, that he very properly at once amputated the arm, and the patient recovered. If in that case we had waited for the line of demarcation, we should have waited in vain; the patient would have died. In such cases you must watch carefully and be prepared to operate at once if it is necessary.

In this man we have reason to believe that the disease is limited. When the line of separation has formed, we shall probably amputate. His temperature has ranged between 100° in the morning and 102° in the evening. This is not excessively high, considering the amount of local disease.

There are other forms of gangrene, which are of considerable interest. One form, which is met with more frequently in military than in civil practice, is due to the wounding of the principal artery of the limb. High up, for instance, if a ball wounds the femoral artery, and the patient does not die from hemorrhage, there is risk of gangrene. In such cases the rule laid down by Guthrie is, I think, the proper one. If the disease appears in the foot, as long as it remains below the ankle the surgeon should wait, for in many cases the gangrene is limited; but if it spreads and passes above the ankle, experience has shown that it will not be arrested until it reaches a point a short distance below the knee. Under such circumstances Guthrie's rule is to amputate at the point of election, i. e., a short distance below the tubercle of the tibia. By so doing you save time and risk. Of course, if in civil practice you have a case which can be traced to an injury of the artery high up, the same treatment may be adopted; where, however, the gangrene is due to a local injury, the artery is probably bruised and occluded by clots. In these cases, the rule is to wait for the line of separation.

Then we have senile gangrene, occurring in old people as the result of atheroma, or calcification of the arteries. In this form it is better not to operate at all, for the amputation of even so small a part as a toe, is almost certain to be followed by sloughing of the flaps, and, in all probability, death will eventually ensue. It is better to simply use deodorizing applications and leave the case to the powers of nature. It was advised by the late Mr. James, of Exeter, England, that in senile gangrene the surgeon should at once amputate in the upper third of the thigh. It is, however, evident that it is impossible to say before-hand, in any given case, that such an operation will be required; there is a possibility that the gangrene will be spontaneously arrested. Further, by performing such a serious operation in an old person, you add greatly to the risks, for even in young and healthy persons this is a dangerous operation. My advice is not in favor of this operation. If the part separates, leaving an unsatisfactory stump, it may be proper to strip up the soft parts and remove a portion of the bone, but do not perform any regular formal amputation.

For the purpose of deodorizing gangrenous limbs, there is nothing better than the application of charcoal, which, as you know, acts mechanically by absorbing the offensive emanations. In the present case we employ the charcoal poultice. If it is desired, a fermenting poultice may be made by the use of yeast or porter; or the charcoal may be applied in the form of a powder. (This patient's limb was amputated above the knee a week subsequently, and for a time he did well, but ultimately sank; dying from exhaustion ten days after the operation.)

FRACTURE OF THE SHAFT OF THE THIGH BONE.

This man has a form of injury of which we see a large number of examples in this hospital. He has a fracture of the shaft of the thigh bone. When admitted there was three-fourths of an inch shortening, marked bowing of the bone outwards and crepitus. He has been under treatment for ten days and is doing well.

One of the common symptoms of fracture of the femur is in this man, not as marked as it is sometimes, that is, effusion into the knee-joint. There is a little effusion here; I find that the patella floats, and that I can press it down, but as soon as I remove my finger, it rebounds. This symptom is almost universally present in fracture of the thigh bone. The explanation of this has been given by Gosselin. The blood effused in the neighborhood of the fracture makes its way downward until it reaches the exterior of the synovial membrane, and by irritation of its external surface produces a positive sub-acute synovitis, followed by effusion into the joint. The swelling subsides spontaneously in the course of a week or ten days, and is, as a rule, a matter of no consequence. It is, however, important that you should know that it is a symptom of fracture, for otherwise, it might give rise to the suspicion that the joint had been injured. It has another bearing of some importance as regards the particular mode of dressing. Many surgeons direct that the extension bands be carried to the seat of fracture and then surround the limb with a circular strip above the knee. If a limb is dressed in this way with the knee covered in, and swelling occurs, it causes pain, and it becomes necessary to remove the dressing. It is unnecessary to carry the extending bands above the knee, for it is a mistake to say that the ligaments of the knee can be stretched by any force which we can apply. No force applied to the skin can specially affect the ligaments.

In regard to the amount of weight, I think that you will generally find two, or at the most, three bricks sufficient. A brick is estimated to weigh four pounds and a half. We begin with one brick. This steadies the limb and prevents spasm; afterwards, we add a second brick and perhaps a third. Some surgeons use very heavy weights, as high as twenty and thirty pounds or even more. There is some risk of producing non-union by such powerful extension. I consider shortening an unavoidable result of fracture of the femur in adults. The

union of the fragments of a broken bone may be roughly illustrated by a piece of broken sealing wax. If you wish to unite the two pieces, it can only be done at the expense of the wax itself. In a broken bone the fragments unite by the formation of granulation tissue, cartilaginous callus develops and finally bone is formed; so that a little shortening is inevitable in an adult, though it may be very slight in children, there may be an increased length of the limb. This is not due to a separation of the fragments nor to a stretching of the ligaments, but owing to the irritation there is developed, to an excessive degree, the osteogenetic function of the so-called cartilages of conjunction, and there is an increased production of bone. As far as the fracture is concerned, there has been shortening, but this is more than compensated for by the increased production of bone.

In order to keep a fractured bone at rest, it is necessary to fix both the joint above and below. When a joint is affected you fix the bone above and below. In fracture of the thigh, the knee-joint should be fixed, and, if possible, the hip-joint. I think that this can be best accomplished by the use of the long splint of Liston, or that of Desault as modified by Physick, with the foot-piece removed.

We have here a long splint extending from the axilla to just below the foot, and a short splint extending from the groin to the inner malleolus. The splints are wrapped in a splint-cloth, and between them and the limb are placed these bags filled with bran and known as junk-bags. Many explanations have been given as to the exact derivation of this term "junk" bags. One is that it is obtained from the French word "*jonc*," which means a reed, from the idea that the older surgeons used reeds in the treatment of fractures. Another explanation is that it is a corruption of the term junction or joining bag. Whatever may be the correct explanation, the fact is, from time immemorial they have been called junk-bags. I prefer the use of the long splints and junk-bags to the use of sand bags, where there is a fracture in the shaft of the bone, for I think that they

give a better lateral support. There is always a tendency in this injury to an outward bowing, and I have seen this deformity quite marked after the use of the sand bags. In fractures of the neck of the bone, sand bags will answer very well. This tendency to bring outwards may also be in part overcome by keeping the limb in a state of abduction. The splints are kept in position by means of five strips of bandage; one at the ankle, one at the knee, one as high in the crotch as it is possible to get it, one around the pelvis and another at the upper extremity of the long splint.

HEMORRHOIDS TREATED BY LIGATION.

The history of this patient is, that for a number of years he has suffered from hemorrhages from the bowel. He at one time lost a great deal of blood, but of late, the loss has not been so great. He is, however, very pale and anæmic. On examining the rectum, I find internal piles. He is anxious to be relieved, and as I can detect no visceral disease, nor any contra-indication, I shall operate. I shall use for this purpose the ordinary nævus needle.

Hemorrhoids or piles are divided into internal and external, or into sub-mucous and sub-cutaneous. Sub-mucous or internal piles, are those which are situated above the sphincter; the purely sub-cutaneous or external piles, are those little masses presenting themselves outside of the anus and covered with skin. A large number, probably the majority, of piles present characters which place them midway between these two varieties. They are partly sub-mucous and partly sub-cutaneous. These are the intero-external, or sub-muco-cutaneous piles.

The treatment differs somewhat according to the position which the hemorrhoid occupies. In the purely external variety, it is perfectly safe to cut them off, for there is usually no hemorrhage, or, if there is, it can easily be controlled. In the purely internal variety, it is safer to tie without cutting, and push the

mass above the sphincter. In the mixed pile it is best to tie, but the portion external to the ligature may be cut away. In this form, before tying the ligature, a groove should be cut in the skin for the reception of the ligature; for these piles have their nerve supply near the skin and their vascular supply near the mucous membrane. By cutting through the skin, the amount of pain is diminished, and by not cutting the mucous membrane the risk of hemorrhage is avoided. It is usually necessary to surround the anus by a series of ligatures so as to include all of the hemorrhoids, for if any are allowed to remain they will probably develop, and the operation will have to be repeated.

The after treatment consists in the application to the anus of a cloth constantly wet with cold water; immediately after the operation, an opium suppository will be introduced into the bowel. When the ligatures separate, at the end of a week or ten days, there will remain only small ulcers, the healing of which may be hastened by the occasional application of nitrate of silver. This operation is apt to be followed by retention of urine, but this is less likely to occur if the precaution of stretching the sphincter is taken. The catheter has often to be used for five or six days. When the ligatures come away, the retention disappears.

(The doctor then removed several piles of the mixed variety, transfixing them, tying in two sections and cutting away the projecting portion).

AN EXPERIMENTAL STUDY ON THE ACTION OF PILOCARPIN.

BY DR. JULIUS POHLMAN, Buffalo, N. Y.

In the proceedings of the American Association for the Advancement of Science, at the Cincinnati meeting, 1881, I find the record of an observation made by Dr. D. W. Prentiss, of Washington, D. C., on the changes in the color of human hair produced by the administration of pilocarpin.

In order to obtain a little more accurate knowledge upon this subject, I determined to test by experiments, and to that end procured, on September 17, 1882, two Albino rabbits, one of which was treated, while the other was kept on the same food and under the same conditions for reference, to enable me to detect any change going on in the coloring of the hair.

The experiment consisted in the daily administration of three hypodermic injections of pilocarpin, aggregating to 1, $1\frac{1}{4}$ and $1\frac{1}{2}$ grains, dissolved in half an ounce of water, per week. As I did not intend to observe the diaphoretic effects of the drug, and only wanted to establish its action upon the color of the hair, I did not increase the dose to any extent.

The rabbit received from

September 18th to September 25th,	1	grain.
“ 25th to October 2d,	1	“
October 2d to “ 9th,	$1\frac{1}{4}$	“
“ 9th to “ 16th,	$1\frac{1}{4}$	“
“ 16th to “ 23d,	$1\frac{1}{2}$	“

I discontinued this experiment on October 23d; the result was entirely negative. There was not the slightest change in the coloring of the hair and eyes; the fur was as white and the eyes were as red on October 23d as on September 18th. During all this time the health of the animal did not seem to suffer any; there was no salivation; appetite and strength, the latter well attested by its powerful kicking, never failed; it kept itself neat and clean, and did not seem to suffer any inconvenience outside of the pricking of the needle of the hypodermic syringe.

I am sorry that I did not make a post mortem examination of this rabbit at the time I discontinued the experiment.

After the Albino rabbit had been under treatment two weeks, I thought that the drug might, perhaps, act better upon lightly-colored animals, and for this reason procured two other rabbits, male and female, of the same size and age. The male, *A*, on which I experimented, had the following markings: A patch of

rusty brownish-blackish color between eye and ear on each side of the head extended anteriorly in a narrow streak around the eye, and posteriorly to the base of the ear, which had a blackish color. The rest of the body of the animal was white, with the exception of three small narrow patches of a light rusty-yellow color along the spinal column, and one on the tail.

The colored female rabbit, *B*, was of a uniform light brown, and kept on the same food and under the same conditions as my patient. Samples of hair were clipped from it at the beginning and at the end of the experiment to meet any objection that would ascribe the darkening of the hair to increased age.

A was treated to the following quantities of pilocarpin, administered in hypodermic injections three times daily:

From October 2d to October 9th, 1 grain.

“ “ 9th to “ 16th, 1 “

At the end of this week the color on the back had darkened a little.

From October 16th to October 23d, 1 grain.

During the course of this week a faint spreading of the color over the posterior half of the animal was perceptible along the spinal column towards the tail and the upper parts of the hind legs.

From October 23d to October 30th, 1½ grain.

The color kept spreading more, slowly appearing in faint small patches on the sides of the animal. The original color on its back had almost reached its maximum depth at the end of the week and consisted of a chocolate brown. The intensity of the induced coloring kept increasing from the spinal column downward.

From October 30th to November 6th, 1½ grain.

The dose seemed too large, judging from the quiet and drooping attitude of the animal towards the latter end of this week, and I therefore resorted again to the smaller original doses.

From November 6th to November 13th, 1 grain.

"	"	13th to	"	20th, 1	"
"	"	20th to	"	27th, 1	"

The colored part of the animal had increased constantly in size, and toward the end of the month covered almost the whole posterior half of the animal's body, including hind legs and tail; faint patches began to appear a little back of the shoulders.

From November 27th to December 4th, 1 grain.

"	December 4th to	"	11th, 1	"
"	"	11th to	"	16th, 1

The induced coloring of the animal had deepened in tone considerably and covered about the posterior two-thirds of its body. The peculiarity of it consists in the fact, that when the hair is lifted by a motion of the hand from behind forward, the animal appears darker. The coloring matter has gradually forced its way outward along the hair, and large numbers of their tips are still white where the pigment has not yet had sufficient time to make its way through the whole length of the hair. In contradistinction to this, the natural color of the hair of animals is, as a rule, darkest at or near the tips.

To watch the slow increase of the color, both in quantity and in quality, was a matter of considerable interest. Small patches, in their infancy of coloring, could be detected by a lifting of the hair when the smooth fur looked as yet pure white. Slowly and gradually the first faint color would darken and extend outward, from week to week, and I am sorry to be at present unable to say how far this artificial coloring process could have been extended.

There was no increase in size or depth of color in any of the dark portions of the head, nor did the eyes darken any. All the increase of pigment was confined to the posterior portions of the body.

With the exception of a few days at the beginning of November, the animal apparently enjoyed good health, and did not

evinced any signs of inconvenience or sickness after receiving its daily ration of hypodermic injection in the morning, at noon and in the evening.

Rabbit *B* did not change the color of its hair the slightest, as was testified by a comparison of the samples of hair taken at the beginning and at the end of the above-described experiment.

It would be interesting to find out whether a pair of animals, colored artificially in this way, would transmit the original or the induced color to their offsprings; also, whether a disease, induced by the continued use of pilocarpin, would be hereditary; and whether the artificial colors would be permanent or again disappear with the discontinuance of the use of the drug. There is likewise a possibility that the medicine may act more powerfully on carnivorous than on herbivorous animals, and my future experiments in this line will include dogs.

On December 17, 1882, the two rabbits were killed for the purpose of a post mortem examination. Heart, lungs, liver, stomach and kidneys were in a normal condition in both animals, but spleen and supra-renal capsules presented a striking difference. The spleen of *A* was enlarged to about twice its natural size and crossed in various directions by strong bands of connective tissue. The supra-renal capsules of *B*, of a pale, yellow color outside, presented on longitudinal section the cortical and medullary substance sharply defined. The former of the same pale yellow, the latter of a fleshy color, darkest at its exterior margin. The capsules of *A* were a little larger than those of *B*, and of the same appearance outside. A longitudinal section revealed a very ill-defined division between the two substances; the distinct reddish color of the medullary portion in the healthy animal had almost entirely disappeared, and only a faint streak along the center of the section indicated its presence. The cut surface of the cortical substance had a reddish color which gradually merged into the small semi-translucent fleshy colored mass of the medullary substance. A microscopic examination bears testimony of this destructive process in the

capsules. As my preparations were not stained, I am unable to record the nature of the changes. The best view of the sections I obtained by polarized light with a $\frac{4}{10}$ Beck's objective and low power eye-piece. The sections were kindly made for me by Dr. Geo. E. Fell, of this city.

Of course, it would be premature to theorize or draw any deductions from these single and incomplete experiments. I think, however, that I have succeeded in demonstrating the capability of pilocarpin to darken the color of the hair in the presence of pigmentary matter, perhaps by a stimulating action on its formation; but that the drug is unable to produce color where pigmentary matter is absent, as shown in the case of the Albino rabbits.

Whether the pathological condition of the supra-renal capsules and the spleen had any connection with the increased formation of pigment (vide Addison's disease) or was only an incidental effect of the drug, I hope to demonstrate more fully during the year.

The rabbit on which the above-described experiments were made is at present in the museum of the University of Buffalo.

TONSILLOTOMY.

BY CHARLES C. F. GAY, M. D.,

Surgeon to the Buffalo General Hospital.

This is an operation so often neglected, to the detriment of those afflicted with tonsillar disease and tonsillar enlargement, that I deem the subject of sufficient importance again to call attention to it. The necessity for the performance of this operation is apparent to any one accustomed to frequent inspection of the throats of patients. The chronically diseased and enlarged tonsil acts as a foreign substance in the throat; it causes irritation and excites coughing; the tonsil becomes more inflamed whenever a cold is contracted, and, unless timely removed, it leads the way to the advent of phthisis, and is, indeed, a pre-

disposing cause of this affection. The gland, on account of chronic disease, may have ceased to perform the function of a gland; physiologically, it is no longer a secreting organ; hence, the last and only objection to its ablation is disposed of and there no longer exists reason for its preservation.

As an objection to excision I ought not to omit to state that impairment of the virility of the individual is adduced as an argument against tonsillotomy; but the weight of authority is opposed to this theory. More recent writers have been able to adduce abundant evidence to disprove the doctrine just alluded to. That the procreative power should have been believed to be at all affected by removal of the tonsils, is as strange as it is absurd. The adoption of such a theory may be regarded as another instance of the wonderful facility of the medical mind for embracing medical vagaries. I herewith report, in brief, a few illustrative cases, notes of which were taken immediately or soon after the performance of the operation.

Case 1. J. H., female; aged 16 years; has been troubled for years with tonsillitis. She has a cough and her general health is impaired; the left tonsil is much enlarged and indurated; it is about the size and shape of a small butternut. I excised the tonsil, using the tonsillotome. For a moment there was considerable hemorrhage, which ceased spontaneously. Patient had no subsequent trouble; cough disappeared; health was restored and remained good thereafter.

Case 2. J. B., aged 4 years; male; has had much trouble with his throat; frequent attacks of double tonsillitis. The tonsils have, in consequence, become much hypertrophied and affect the voice and impair the speech. He was put under ether and the entire right and one-half of the left tonsil excised with the tonsillotome. But little hemorrhage followed; recovery was uninterrupted, and thereafter health was good, with no return of the tonsillar enlargement.

Case 3. N. T., female; aged 8 years; has enlarged tonsils, which are always troublesome and get inflamed whenever she

contracts a cold. Put under ether and the right tonsil removed. But little hemorrhage followed the operation. Excepting some soreness of the throat, there was no complaint during the after-treatment.

Case 4. Child, aged 7 years; has enlargement of both tonsils. They are troublesome in speaking and sleeping. Excised the left tonsil, it being the larger of the two, and left the other with the hope that removal of the one would cause absorption of the other. Hemorrhage arrested by ferri persulphatis solution. Patient passed from subsequent observation.

Case 5. Child, aged 17 months; has had enlarged tonsils, the mother says, several months; has difficulty in sleeping; snores and is wakeful. Both tonsils are enlarged. Ether was given when I excised the right tonsil. As no diminution in size of the other followed, it also was removed seven months afterwards. Since recovery nothing has been heard of the child.

Case 6. G. S., male; aged 6 years. Tonsils both very large and the child cannot sleep soundly in consequence. Excised right tonsil under ether. Child made a good recovery; the left tonsil became so much absorbed as to give no trouble.

Case 7. Miss C., aged 23 years; became alarmed on account of a chronic cough; both of her tonsils are chronically enlarged; right tonsil is the larger of the two; they meet; obstruct respiration; her voice is affected and swallowing is difficult. She is worse whenever she contracts a cold. I removed the right tonsil with the tonsillotome without ether, cutting it close at its base. Hemorrhage was profuse, and was finally arrested by a sponge probang, saturated with vinegar, held firmly for two or three minutes upon the wound. Sol. of persulph. ferri and ice had been first employed without effect. There was no secondary hemorrhage. Process of granulation confined her to the house for one week. Cough and general health are much improved.

Case 8. Miss F., aged 20 years; has enlargement of both tonsils. She says she had acute tonsillitis three months ago.

She was etherized. I excised the right tonsil. One month later she was again etherized and the left tonsil was removed. This operation was followed by alarming hemorrhage, which, however, was arrested, after failure from the application of ice and sol. ferri persulphatis, by creosote, applied by a sponge probang. In five days the patient was entirely recovered.

COMMENTS.—One may have reasonable expectation of the absorption of the remaining tonsil after complete removal of the larger one, but this result cannot always be depended upon; it is advisable, however, to wait a reasonable length of time for the process of absorption to accomplish what we wish, unless the size of the remaining tonsil be such as to make the propriety of its immediate removal unquestionable.

I have never known permanent advantage to follow partial ablation of a tonsil; excision, entire and complete, should always be practiced. Ordinarily, there will be little or no permanent diminution in the size of the gland after its partial or incomplete removal. There will likewise be greater probability of dangerous hemorrhage by partial than by complete excision.

Operators have their preferences in the choice of instruments. My own preference is the tonsillotome in all cases, and I prefer the instrument that cuts from within out. My own instrument is a modification of Fahnestock's, manufactured by Charrier, Paris. It is furnished with a fork with barbed points. I have modified this instrument slightly by removing the beard from one of the prongs of the fork, so as to enable me to disengage more easily the tonsil from the fork after excision.

In operating I always prefer that the patient be etherized and to have the tongue depressed by an assistant.

Standing in front of my patient, I hold the instrument in my right hand in excising the left tonsil, and use the left hand to hold the instrument in excising the right tonsil. Placing the instrument over the tonsil, firmly holding it at the base of the gland, the tonsil is transfixed by the fork and drawn through the fenestrum. The more the tonsil is put upon the stretch

and drawn tensely by the fork, the easier and more surely will excision be accomplished.

It is by no means always necessary to etherize an adult patient or employ an assistant to depress the tongue. Rigid rules in this regard—as in most instances in surgical practice—cannot be prescribed and carried out. There are patients who—on account, perhaps, of possessing less irritable throats than others, or who may have been accustomed to local applications—have almost complete control over their muscles, in which case the surgeon will have no difficulty in operating without ether or an assistant.

Clinical Reports.

A CASE OF DIFFUSE TRAUMATIC CELLULITIS.*

BY B. H. DAGGETT, M. D., Buffalo, N. Y.

Laundry, a ship-carpenter, thirty-eight years old, temperate habits, health impaired by a chronic disease, struck himself upon the back of the hand over the second metacarpal bone. He reported to me the second day after his injury for examination, and I found a contusion at the seat of the injury without a break of the skin. Eight days afterwards I was invited to take charge of the case, and I found him suffering severely and greatly prostrated. The hand and forearm were extremely swollen, the skin was cold, mottled and boggy, the hand crepitated under pressure, vesication had denuded its dorsal surface, and sphacelation was exposing the second and third metacarpal bones and extending down the corresponding fingers.

The periosteum was intact. An ichorous discharge with shreds of sloughy, necrosed tissue was bathing the parts. Deep-seated suppuration could be detected in the palm of the hand and thick pus was oozing from a small cut opposite the base of the first

* Read before the Buffalo Medical Union.

finger. Putting my probe into this cut it passed freely across the hand beneath the deep palmar fascia. The fingers were so distorted by œdematus swelling, that a bystander asked if they were not broken.

The patient was etherized, and incisions deep and free were made down the back of the hand over the second and third metacarpal bones, and down the corresponding fingers to the middle joints. The palm was also opened by two incisions. From these cuts there flowed nearly a quart of inflammatory blood, serum and pus. The hand was bathed in carbolized water and the same was injected into the excavated palm, and both hand and arm were enveloped in a generous antiseptic poultice, which was to be renewed every four hours. An anodyne when required, quinine, ferric chloride and alcoholic stimulants with a suitable diet were prescribed.

From this time improvement was gradual but continuous, and in nine weeks the hand had healed except between the fingers. The third and fourth fingers would close nearly into the palm of the hand, and the first and second fingers would readily brush off the end of the thumb.

In three months, Laundry was again at work at his trade. Prompt and radical measures had checked in its course a deep-seated, rapidly-spreading, non-self-limiting, inflammatory affection which had induced great systemic depression, local sphacelation, and was threatening not only the integrity of the limb, but life itself. In this connection, and for the purpose of contrasting the course of a phlegmonous erysipelas or cutaneous cellulitis, I will relate the following brief history :

Mr. T., forty-eight years of age, full habit, florid skin, a free liver, temperate habits, robust health, sprained his ankle in California, and continued on his journey home, not giving it needed rest. I saw him on his return, and observed that he if kept quiet and the limb elevated, the swelling about the ankle and the erythymatous blush which extended to the knee would subside, and that dependence of the limb with slight use would

restore the redness and swelling. He was put to bed one night with his limb in a hydropathic pack, and got up in the morning saying, "I am cured in a night." Thirty minutes' use of the limb renewed the swelling and redness. This manner of using the limb was continued in spite of protests, until the inflammatory action extended to the cellular tissue, resulted in suppuration, thus producing a cutaneo-cellulitis or a phlegmonous erysipelas. The exciting cause in both cases was traumatism without septic or wound-poisoned infection. They were allied in character, but differed in the degree of their severity and in their course. In the first case, the cellular tissue was primarily affected, the skin suffering later by being cut off from its base of supplies. In the second, the skin was primarily affected, the inflammation extending therefrom to the cellular structure. In the following case the exciting cause of the cellulitis is evident:

J. C., a laborer, thirty years old, doubtful habits, good health, crushed the middle finger of the right hand at first joint, beneath the flange of a barrel of oil, and refused to have it amputated. Four days afterwards he called upon me, and I found the finger below the injury gangrenous, and above swollen and inflamed, and I amputated at the second joint. The next day the stump and hand were greatly swollen. The flaps were freed and the hand bathed in carbolized water and poulticed. One of the flaps sloughed and the disease was arrested only after free incisions. In cases one and two, was there some peculiar condition of the system which received from without or begot within itself the *materies morbi*?

Laundry was debilitated by a chronic malady, and he lived near the historic Hamburg canal, without even a friendly fence intervening. The ground is low, wet and unsewered, and kitchen slops, accumulations of decaying animal and vegetable matter, with surface drainage, flow lazily in open gutters. A favorable subject and a fruitful field for the propagation of disease-breeding germs! The etymology of the word erysipelas indicates that it is derived from words which mean reddening of the skin

or a spreading redness, so that an attribute of two forms of erysipelous diseases gives the name to this important class of maladies. The nosonomy of these affections could be properly revised. The word or name cutitis, for skin erysipelas; cutaneo-cellulitis, for phlegmonous erysipelas, and cellulitis would differentiate as between themselves and designate the structures affected and their inflamed condition. Until the special poison or condition of the system which begets these maladies is known and demonstrated, we can only name and treat conditions. Cellulitis has been fully described by Lawrence, Duncan, Nunelly, and their views have been endorsed by later authorities.

It is a graver disease than its fellows — skin and phlegmonous erysipelas — and is characterized by more prostration and nervous excitement. Its onset may be insidious or violent. Its course is not *self*-limiting. "Often the skin gives no clue to the condition beneath." Traumatic cellulitis spreads by continuity of tissue from the seat of injury; septic or wound-poisoned cellulitis attacks remote parts, between which and the puncture no direct connection can be traced. Metastasis is a concomitant of septic or wound-poisoned cellulitis. In relation to the local treatment, the most important indication is to make early and free incisions to permit the escape of the irritating inflammatory products, and which also induces local depletion.

Foreign Correspondence.

LONDON, April 5th, 1883.

DEAR JOURNAL—What was said in my last, respecting the admirable facilities for teaching possessed by St. Thomas Hospital School, may also be said with but little variation of the other London schools; all of them are well equipped with everything necessary to give practical instructions. It is apparent that these schools do not make it a primary object to

make money out of the students, but rather, the aim is to impart such a knowledge as will enable their men to pass their examinations with credit to themselves and to their college. We see here in operation the plan which the JOURNAL has so strongly urged upon the profession in America, viz.: The existence of examining boards, wholly unconnected with the colleges, composed of men eminent in the profession, which alone have the power of conferring diplomas or licenses to practice. The teaching colleges have no power to confer a degree, much less a license to practice. All of the students must appear before the examining bodies, which are also styled colleges, as, *e. g.*, the Royal College of Physicians of London. They do not, however, give instruction at all, but their diploma or license is conferred upon those students who successfully pass their examinations, and enables the recipient to practice medicine or surgery in any part of the United Kingdom. There is, however, in the present system a serious defect, in that the power to grant licenses to practice is vested in some nineteen different corporations, and there is a lack of uniformity as to the qualifications required. A man, for instance, may be "plucked" by one of the London examining boards, and forthwith present himself before some other licensing body and successfully pass the examination, which gives him a legal status in any part of the Kingdom. This has given rise to the custom of appending to the degree an abbreviation signifying the licensing body. M. D., Lond., is one of the most difficult to obtain, and is considered to outrank the others; and the man who has it, is said to have "a higher qualification." Some of the examining boards, however, are supposed to lower their requirements below a certain standard, and all require at least the following:

"Every applicant for license must produce evidence that he has been engaged in the study of medicine during a period of at least four years subsequent to his registration as a medical student, which period shall include attendance during not less than four winter sessions, or three winter and two summer

sessions, at a recognized medical school. He must produce certificates that he has attended the following courses at a university, or at some medical school recognized by the college: Anatomy, six months; Practical Anatomy, six months; Chemistry, six months; Practical Chemistry, three months; Materia Medica and Pharmacy, three months; Physiology or Institutes of Medicine, three months; Practice of Medicine, six months; Clinical Medicine, six months; Principles and Practice of Surgery, six months; Clinical Surgery, three months; Midwifery, three months; Medical Jurisprudence, three months; General Pathology or Pathological Anatomy, three months; Practical Pharmacy, three months. The applicant must also produce evidence of having attended the practice of a public hospital (containing not fewer than eighty beds) during a period of not less than twenty-four months, twelve of which must have been spent in attendance on the medical wards. He must have attended for six months the practice of a public dispensary, or have acted for six months as clinical clerk or dresser in a hospital, or have been engaged for six months as visiting assistant to a registered practitioner. He must produce a certificate of having attended at least six cases of labor under the superintendence of a qualified medical practitioner, and that he has studied vaccination under a competent and recognized teacher. The examinations are conducted partly *viva voce*, partly by written papers.

Candidates for the degree of M. B., from the universities of London, Oxford, Cambridge or Dublin, must have graduated in arts before commencing their medical studies, and all the licensing bodies require that the candidate shall have passed a moderately good preliminary examination—about equal to the Matriculation requirement at Harvard. We would be thankful if we had succeeded in attaining this much, but here there is still a continued and increasing demand for improvements in medical education.

There is now before Parliament a new "Medical Bill," which apparently expresses the sentiments of the progressive men, and receives the hearty support of the medical press. Among other things, it provides for uniformity in requirements, and the establishment of but one licensing body for each of the three Kingdoms; and it is instructive to us to note, that the degree and license-conferring bodies, which would, by the passage of the bill, be shorn of their powers and income, oppose it most heartily, and compact, powerful and well disciplined bodies of this kind are not easily thwarted.

The method of teaching here is quite different from that in American schools, in that didactic lectures occupy an inconspicuous place in the course. One or two a day is considered enough, and it is seriously proposed to do away with them entirely, knowledge of the character imparted by lectures being supposed to be better obtained from the text-books. We, therefore, do not see here the large and convenient amphitheater nor any great body of students collected together at any one time; nor, indeed, do we hear such able and fluent lectures as may be listened to with admiration in America. Talent of that kind is not greatly demanded and is therefore not cultivated.

While one cannot but admire the immense advantages which the student enjoys here, and deplore the lamentable deficiencies of our present system of medical education, still, it is not to be denied that in spite of our educational defects, the profession in America numbers in its ranks our full proportion of men, peers in medical knowledge and ability with those of old England. As to our younger men, so far as my limited observations have gone, I think we have a larger proportion of hard students; men who, recognizing that when their diplomas were obtained they had but commenced the study of medicine, had humility enough to work on, gradually acquiring a wisdom infinitely superior to a mere knowledge of a load of useless formulæ and facts of little value to the active practitioner of the healing art. It has been said that in England knowledge, not wisdom, has

become the approved end of education, and cleverness in examinations the "final test of success," which recalls Cowper's differentiation:

"Knowledge and wisdom, far from being one,
Have often no connection. Knowledge dwells
In heads replete with thoughts of other men,
Wisdom in minds attentive to their own.
Knowledge is proud that he has learnt so much ;
Wisdom is humble that he knows no more."

There is, however, not the slightest danger of our erring (at least for years to come), in demanding a too technical or severe examination, but there is a reasonable hope that obtaining an independent examining board in each state, we will have found a remedy for the chief of the evils which now disgrace the American profession, and in time a happy absence of that class of ignoramuses with an M. D. to their names which now belittle the American degree.

The March number of the JOURNAL only reached me this week. It was most heartily welcomed, as it was like seeing the face of a familiar friend in a strange land. I have read with much interest Dr. Tremaine's article on "Antiseptic Surgery." By the way, Lister says that Antiseptic Surgery is no longer surgery which excludes the causes of putrifaction, but all those methods now universally employed in some form or other, which more or less *impede* the growth and fermentative action of organisms in the fluids and tissues of wounds. Listerism, is the great principle of *the complete exclusion from wounds of the causes of putrifaction.*

The application of this principle, in the way worked out by him, may be called the Listerian method, and is undoubtedly the best mode now known to accomplish the end desired. That method is best designated by the term "Aseptio," as expressing the result, viz., a complete absence of putrifaction.

It is quite the fashion, at the present time, to assert that the excellent results of the aseptio method depend upon the clean-

liness which is supposed to be a concomitant of its use; but in Lister's operations, cleanliness is not a noticeable feature; indeed, he said he was glad to observe accumulation of blood and dirt around the margin of the wound; so long as micro-organisms do not enter this "dirt" it protects the wound from irritation of the antiseptic employed. The spray, he considered the least necessary of all the precautions, because there are fewer organisms in the air than in surrounding objects, and those which fall into the wound may be destroyed by washing the surface with an antiseptic lotion. However, this washing of the wound with an antiseptic lotion is considered objectionable, as being irritant, adding to the danger of carbolic acid poisoning, and not as effective as the spray. In his practice one does not see any irrigation or injection with the solution, but he applies it freely to everything which may come in contract with the wound rather than to the wound itself. This, I think, explains why he does not have any cases of carbolic acid poisoning.

The essentials of his practice have been so well epitomized by Dr. Tremaine, that I will not go into the details of an operation as performed by him. The attention to the minute though vital details, in the carrying out of which it is so easy to slip, is with him, probably, not a matter of thought but habit. If his hand goes out of the spray for an instant, knife and hand invariably go into the stronger solution before again approaching the wound. He now employs the eucalyptal gauze and commends it. As an anæsthetic he uses chloroform, which is administered guttatim on a corner of a towel held an inch or so from the nostrils. He astonished me by saying that he did not believe, as some did, in the danger from chloroform properly administered, and that his direction to his administrator of the anæsthetic was, "Pay no attention to the heart and pulse, watch only the respiration." This rule will do very well with ether, but it is certainly opposed, both by theory and experience, in the use of chloroform.

One cannot but be charmed with Lister's cordiality and readiness to answer questions and to show cases. Nor can he fail to be impressed with the admirable results attained in his wards.

I am inclined to the opinion that the failures which have been reported by eminent men who have employed the Listerian method are due to a non-fulfillment of the necessary details or to attempts to improve upon them. As Volkmann has said, "Many of the unfavorable judgments passed upon this method are due to the fact that surgeons who have not yet learned to experiment with it have made it the subject of their experiments."

I was not a little interested by a visit to the British Lying-in Hospital. The physicians are Heywood Smith and Fancourt Barnes. Since the beginning of 1881, a strictly antiseptic plan of treatment has been adopted. Each patient is delivered under a carbolic spray of one to sixty. She is twice daily syringed out with a two per cent. solution, from the first day after labor. All washing of the genitals is done with a one to sixty carbolic solution. In each ward of the hospital there is continually playing a carbolic spray of one to eighty, and the floors are frequently washed out with a carbolic solution. The physicians declare that since the antiseptic precautions have been adopted there is far less feverishness among the patients. Recoveries are more rapid and cases requiring operative assistance recover without a single bad symptom. During the two years there have been but two deaths. One from unavoidable hemorrhage, and one was a widow woman who, when admitted, was extremely weak and emaciated, having been in a starving condition for two months before admission. Three hundred and thirty-two patients were delivered during the two years. Every patient receives three times a day a mixture of quin. sulph. gr. ij, ext. ergot liq. ℥ x, tr. opii ℥ v, acid phosph. dil. ℥ x, aqua ℥i.

Five hundred and thirty-one out-patients were delivered during the past year, with but one death; the same antiseptic precaution being employed.

At the Samaritan Hospital, Knowsley Thornton performs all his operations on the aseptic principle; his excellent results are well known. Perhaps a majority of the surgeons of London employ the Listerian method; but as an impartial observer, I must say that there are not a few eminent and most successful men here who deny the superiority or even the value of Listerism.

Here, however, let me record my own conviction, that however surgeons may differ as to the aseptic method being essential to the best results, or whether it be replaced by a superior method, Lister wears a crown which will grow brighter through the ages, in that his theories and practice here have been the essential cause of that marvelous and happy audacity which, during the past few years, has revolutionized surgery and brought within its sphere of operation all those diseases of joints and of internal organs which were formerly considered beyond the range of practical surgery.

At the Samaritan Hospital, Bantock, who divides the honors with Thornton, has entirely discarded the aseptic method. He told me that he had given it a fair trial, carefully carrying out all the details of the Listerian method, and that his experience with it was unfortunate. While using it he had lost eight cases out of thirty-six ovariectomies. One of the fatal cases had every symptom of acute carbolic acid poisoning. Since discarding the spray, etc., he had performed twenty-three operations and had lost but one case. Keith and Lawson Tait have also, as you know, declared that they get better results without it.

In general surgery, Savory at St. Bartholomew's, and Davy at Westminster, have certainly markedly successful results in their practice, and yet, they do not embrace the aseptic theories or methods. Davy says that Lister obtains his good results not from the use of the Listerian method, but because he is an excellent and careful surgeon and gives his cases much personal attention; but that Listerism has done injury by causing surgeons to belittle, or even ignore the *vis medicatrix naturæ*.

Davy employs the open air treatment of wounds. His results appear to be very good indeed. It is very interesting and instructive to accompany him in his rounds and witness his operations. He has the genius of a "Yankee" for invention, as displayed in numerous surgical mechanisms. He has used his lever for making pressure through the rectum upon the iliac artery in amputations at the hip-joint, now, in forty-two cases. The largest amount of blood lost in any one operation was five ounces, and the least one ounce. The mortality was forty per cent. Its employment is not without danger, as Mr. Davy exhibited one specimen, obtained by a post mortem in a fatal case, which showed that the coats of the rectum had been perforated.

For performing Ogston's operation for genu valgum, and his own very successful method of treatment for bad cases of talipes varus, by the removal of a wedge-shaped portion of the tarsus, he has devised several very ingenious instruments which greatly simplify the operations. He takes plaster casts in all his severe cases of club-feet, before and after operations, and can thus exhibit the result of treatment.

I had intended in this letter to have given you some notes from the "special" hospitals for diseases of the skin, urinary organs, etc., in which I am more particularly interested, but I have, I fear, already made this letter too long and must leave them for another communication.

I had the pleasure of meeting here Dr. A. J. Steele, one of the editors of the *St. Louis Courier of Medicine*, who is known to a great many of your readers, having formerly been Demonstrator of Anatomy in the Buffalo College. All the Americans whom I have met here express themselves as highly pleased with the opportunities for study and observation which London affords, and I must personally express my appreciation of the great kindness and attention which one receives from the great teachers here. They will not only give themselves trouble

to show cases and explain methods, but put one under obligations by a hospitality which I fear is not as often shown to the stranger in America.

A. R. D.

Selections.

RADICAL CURE OF HERNIA.

In two clinical lectures in the *Indian Medical Gazette*, Dr. R. McLeod describes the method of operating for the radical cure of hernia, which he has practiced in several cases during the last two years, and gives a table of the cases with details of the results. His plan of operation — not peculiar to himself — is to isolate the sac quite up to the internal ring, there place a catgut ligature around it moderately tight, and tie the same thread at intervals of half an inch lower down the sac three times more. He cuts off the sac below the lowest ligature. With a Wood's needle he then stitches the inner pillar and conjoined tendon to the outer pillar and Poupart's ligament, leaving the ligatured neck of the sac as a plug in the inguinal canal. The wound treatment is antiseptic, and Dr. McLeod lays great stress on this point, insisting that the operation is not justifiable unless this precaution is taken. In all, Dr. McLeod has performed this operation twenty-eight times with a total mortality of six. Of these cases seven were patients with strangulation of the hernia, and this operation was done as a sequel to ordinary kelotomy; of these one died of collapse eight hours after the operation, and another ten hours after the operation of laparotomy, performed five days and a half after the first operation on account of persistence of the symptoms of obstruction. In four patients the hernia complicated large scrotal tumors requiring operation. Two of these patients died from septicæmia, but in neither of them was there any peritonitis or mischief in the seat of the operation upon the hernia. The remaining seventeen were

cases of reducible hernia, and among them there were two deaths — one from pyæmia, and one patient who was removed from the hospital ten days after the the operation, died two days later, probably from carbolic acid poisoning. These cases do not show the operation to be one attended with serious risk if performed antiseptically. Four of the six fatal cases, in two the operation cannot be credited with causing the mortal shock. In the two cases fatal from septicæmia, the poison appears to have been absorbed from the scrotal, and not from the inguinal, wound. The other two deaths are directly traceable to the operation. Evidently it is not a procedure to be entered upon lightly, or without clearly explaining the risks to the patient. But whenever kelotomy has to be performed, it would appear to be wise if possible to supplant it by an attempt to procure a permanent cure of the affection, for this adds nothing to the danger of the original step, and indeed by closing the track into the peritoneal cavity possibly lessens one of its perils.

MEDICAL CORPS U. S. ARMY.

An Army Medical Board has been ordered to assemble at the Army Building corner of Houston and Greene Streets, New York City, New York, March 1, 1883, for the examination of such persons as may be properly invited to present themselves before it as candidates for appointment in the Medical Corps of the Army, and will probably continue in session about three months.

All candidates for appointment in the Medical Corps must apply to the Secretary of War for an invitation to appear for examination. The application must be in the handwriting of the applicant, must state date and place of his birth and place and state of which he is a permanent resident, and must be accompanied by certificates based on personal acquaintance from at least two persons of repute as to citizenship, character and

moral habits; testimonials as to professional standing from Professors of the medical college at which they graduated, should also accompany the application if they can be obtained. The candidate must be between 21 and 28 years of age (without any exceptions) and a graduate of a regular medical college, evidence of which, his Diploma, must be submitted to the Board.

Further information regarding these examinations and the nature thereof, can be obtained by addressing the Surgeon General, U. S. Army, Washington, D. C.

NITROUS OXIDE AND CHLOROFORM.

Nitrous oxide and ether are frequently administered in combination, or rather in succession, as a means of producing anæsthesia. The employment of a combination of nitrous oxide and chloroform has been recently advocated by M. de Saint Martin. Experiments on animals lead him to prefer the mixture of eighty-five volumes of nitrous oxide with fifteen volumes of oxygen and six or seven grammes of chloroform added to each hectolitre. This mixture causes anæsthesia very rapidly and the period of excitation is suppressed; and the chloroform, moreover, being much diluted does not irritate the air-passages. The working zone of this mixture is far greater than that of chloroform alone.

GLYCERINE.

M. Desguin of Anvers, has given glycerine internally in certain forms of skin disease with, it is said, marked success, especially in acne punctata and the furuncular diathesis. He commences with four drachms daily and gradually increases the dose. He states that the secretion of the cutaneous glands, which is thick and irritating in these diseases, becomes more liquid, and cutaneous irritation is notably lessened. During convalescence from scarlet fever, he believes that it facilitates desquamation.

CÆSAREAN SECTION.

Prof. Spaeth, of Vienna, performed Cæsarean section and sewed up the uterine wound with five deep and four superficial catgut stitches, largest size of Lister's antiseptic chromic acid ligature. The woman died forty-eight hours after of peritonitis. The autopsy was surprising in its revelations. Every catgut suture in the uterine tissue was found untied and straightened out, while the wound was open and gaping, the lochial discharges having escaped into the peritoneal cavity. The original knots in the catgut had been tied with especial care by Prof. Weinlechner.—*Phil. Med. Times.*

Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Regular Annual Meeting, April 3d, 1883.

Vice-President, Dr. John Cronyn, in the Chair. Dr. C. M. Daniels, Secretary.

Present—Drs. Hauenstein, Bartlett, Coakley, Burghardt, Barker, Heath, Gay, Briggs, Brecht, Peterson, Stockton, Granger, Hubbell, Clark, Hopkins, Tremaine, Hartwig, Dorland, C. A. Ring, Wall, Mann, York, Strong, Bartow, Fowler, Moody, MacNiel, McBeth, Howe, Potter, Fell, and by invitation, Drs. Hayd and Crego.

Application for membership was received from Dr. F. S. Crego, who was duly elected.

Essay—By Dr. Frederick Peterson; subject, "Contagium Animatum." The paper was a comparatively full elucidation of the more recent ideas of the origin, development and transmission of disease. It was listened to with marked interest and called forth the following :

Discussion—Dr. Strong thought that much could be said, and alluded to the difficulties we all feel in trying to decide as to whether bacteria are the cause or effect. As for himself, he still remained in doubt.

Dr. Mann remarked that one point the essayist had evidently forgotten to mention, viz., the method by which the bacteria produce disease.

Alkaloid substances had been found in the excretions and supposed to be the product of the bacteria, and said that if large trees, etc., can produce an alkaloid, why is it not possible with these small fungi? It seems very puzzling that bacteria will infest the body and yet produce disease; we may suppose one of two things, either they are not the same as they appear, or a certain state of the system gives them a virulent property.

Dr. Howe said the subject was one of too much importance to pass without some comment. Referring to the great mortality from contagious diseases, he said it was given by authority that during the last ten years the number of deaths in the United Kingdom from "scarlatina" alone was ninety-two thousand, this being greater than the loss for the like period during the Napoleonic war. He believed that spontaneous disease did not occur; and speaking of the germs themselves, he thought it highly probable that although there might be a striking resemblance in their general appearance, in other properties they might be entirely different, and that we really had no right to say that, even though they swarm in the body, they are the same.

Dr. Hartwig thought the paper an excellent one, and believed that bacteria are the cause of more than was generally supposed, and especially referred to their action in pneumonia and acute rheumatism. He asked to be informed in regard to the observations of Tyndall upon the subject.

Dr. Fell was gratified that Dr. Peterson kept abreast of the times. He believed in Koch and his discoveries, as his mistakes were rare; also that disease was caused by these minute organisms;

he considered Tyndall's experiment a success in its revelation of these germs, and that we are on the way to know more of these germs in their causation of disease.

Dr. Barker believed in the theory, that possibly all diseases were caused in this way; he spoke of the bacteria in the cocoon which was so destructive to the silk interests several years ago, and that it was discovered by scientific investigation and successfully combatted. He thought it compared favorably with the recent discoveries of Koch and others, and that the diseases would be provided with a successful remedy.

Dr. Barrett spoke of the rapidity of reproduction and development of these organisms. He believed they infected only under certain conditions, and compared it to certain fungus growths upon grain which are only developed when the condition became favorable.

Dr. Tremaine spoke of the antiseptics used to destroy the germs, and the resisting power of normal healthy tissue, and in surgery, that granulating wounds were less likely to receive poisonous germs.

Dr. Hopkins felt under personal obligations to the essayist, and believed in the long stated chemical and germ theories, and that they might be found to act together. Also that possibly any chemical substance might infuse a deleterious influence. Possibly all fermentation may be the excretion or secretion of the fungus plant.

Dr. Bartlett remarked that if the germ theory is not right, what is? It seemed that we were irresistibly drawn to it, and that the rise of temperature was caused by fermentation. He thought the spread of certain zymotic diseases might depend upon a special pabulum which once destroyed was not renewed, thus exempting the individual from further attacks. A modification, also, by cultivated views might deprive it of that quality which sustains special spores or bacteria.

Dr. Hayd spoke of the necessity for scientific investigation and general treatment of disease. So far, it was acknowledged

that each produced its like ; referred especially to his observations while in Vienna, that substances such as hay infusion, after passing through a fermentive process and exposed to the air, seemed to take up new and virulent organisms which were proven poisonous, as anthrax.

Dr. Cronyn said the application to prove its value in medicine and surgery was the great point, and that the same appearing germs produce different affections. To his mind, it was in the condition of the individual, and made but little difference which brought the influence to bear upon the sympathetic centers.

Dr. Peterson in closing said he tried to prove the necessity for a living contagium ; it was generally accepted that it was a growing poison and that it must be organic. In reply to Dr. Hartwig, he said that Tyndall's observations were made by passing an electric beam through the ice of distilled water.

The regular order of business was suspended.

The Secretary read the following report :

As your Secretary for the past year, I take pleasure in reporting that it has been one of exceptional progress, the largely increased attendance being an average of *twenty-four* as compared with only *ten* for several preceding years, together with the interesting and instructive character of the several papers on a diversity of subjects, has awakened a decided interest in the proceedings of this society. New life and vigor seemed to be infused, and the efforts of those interested have been warmly seconded and encouraged.

Our membership has now reached a total of eighty-four, having received an addition of seventeen during the past year.

The publication of the monthly proceedings has doubtless been an important factor in aiding our advancement, and to the JOURNAL we at least owe a full appreciation.

The removal to our present location seems to have been a wise procedure, as it is far more convenient for a large number of members.

Financially, the association is in a highly prosperous condition, the annual dues and fees received from new members being ample for all necessary expenses.

Although it has been necessary to drop several names from our list of membership on account of non-payment of dues, the act has had but a wholesome effect and insured greater promptness for the future.

The society never had better prospects, and it is sincerely to be hoped that all will feel a professional pride in trying to promote its prosperity.

CLAYTON M. DANIELS, *Secretary*.

The Treasurer also reported as follows :

Cash on hand April 4, 1882,	\$58.74
Received during past year,	77.25
	\$135.99
Disbursements,	89.65
Balance on hand,	\$46.34

F. E. L. BRECHT, *Treasurer*.

Drs. Fowler and Barker were appointed an Auditing Committee.

The election of officers for the ensuing year being in order, Dr. Hopkins moved that a nominating committee be appointed.

Dr. Howe vigorously opposed the motion as being a bad precedent, as it had been attempted once before and was productive of unpleasant results.

Dr. Hopkins then withdrew his motion.

The election resulted in the following :

President, John Cronyn ; Vice-President, F. W. Bartlett ; Secretary, Clayton M. Daniels ; Treasurer, F. E. L. Brecht ; Librarian, Jas. B. Samo.

The Auditing Committee reported the accounts of the Treasurer correct. And the meeting adjourned.

CLAYTON M. DANIELS, *Secretary*.

Editorial Correspondence.

THE PROPOSED STATE BOARD OF MEDICAL EXAMINERS.

To the Editors of the Buffalo Medical and Surgical Journal.

I have read with a lively interest your vigorous editorial in the March number of the JOURNAL entitled, "The State Board of Medical Examiners."

It seems to me quite certain, that through the dust raised by the discussion of the New Code in the Medical Society of the State of New York, you have discerned a more important question in the report of the Committee on Legislation. Whatever the *status* of the profession of to-day in this country may be, as compared with that of any previous period of its history, it is now evident that its ranks are crowded with half-educated and incompetent men, whose numbers are annually increased by the flood poured on them by the medical schools. This is the fact; why should it be ignored, disguised or excused? The sooner it is recognized and remedied the better for the profession and the people.

Dr. Harvey Jewett, of Canandaigua, in his recent address as President of the Medical Society of the State of New York, said: (San. Eng., Vol. 7, No. 16.) "So long as men are permitted to graduate from some of our most reputable medical schools, to enter the ranks of the regular profession so poorly equipped for life service in a profession which demands the very best talents and preparation, we cannot wonder that quackery continues to flourish;" and again: "The demand is for more thoroughly educated medical men, and that demand must be met by men taken not directly from the farm and the work-shop and the common school, but by those favored by the rigid

mental discipline of academy or college, and well grounded in the principles of natural science."

The late Dr. W. W. Green in a presidential address delivered before the Maine Medical Association, said: (*N. Y. Med. Rec.*, Vol. 20, No. 12.) "It is a hackneyed saying with which too many ears are tickled, 'that there is always room for good men.' Applied to the present condition of the profession it is false. Were only good men and the best men admitted, it would undoubtedly be true, but all over the land, in city and country, are well educated, cultured gentlemen, honest and loyal, striving in vain to secure a competence—yes, a bare living even—and too often is disappointment mingled with shame and mortification at the success of ignorant and unprincipled rivals."

It is not denied that capable men are made under the present system. We know that they are. The fault of it lies in the large number of incapables produced. When a young graduate comes, diploma in hand, before a board of examiners who examine him and not his diploma, he often, very often, learns, to his surprise and chagrin, that he must go home and learn the rudiments of the medical sciences which he believed he had mastered. And he does well, if in the same time he gave to "lectures," he surveys the vastness of his ignorance, and beginning at the bottom he builds up a sound foundation for a knowledge of his profession.

Of candidates for appointment in the medical department of one branch of the public service, more than eighty per cent. fail to meet the requirements of the examining board.

A young and accomplished physician of New York City informed me that there is a demand in the country for these men, (i. e., partly qualified men). I replied, that if there were such a demand it should be denied, both in the interest of the public and the profession.

It appears idle to look to the schools for any general reform in their methods. They will continue to furnish cheap diplomas

as long as there is a demand for them. This is in accordance with the true commercial principles upon which they are generally founded. The reform movement must be begun and carried on by the profession as a body. Let us have laws creating State Boards of Examiners which shall place a valuation on the unknown quantity of knowledge represented by a diploma. Let the Boards establish a minimum standard of qualifications, which shall represent that reasonable degree of knowledge and skill defined by the common law, and which, heretofore, it has been so difficult to establish as a matter of fact. And so by endeavor to make the profession learned, we shall at least secure that it be competent.

KAPPA.

Editorial.

THE ANNUAL REPORT OF THE BUFFALO STATE ASYLUM FOR THE INSANE.

Through the courtesy of Dr. Andrews, we have been favored with the twelfth annual report of the managers of the Buffalo State Asylum for the Insane, including the report of the Superintendent which gives valuable statistical information in regard to the work of this excellent institution for the year 1882. From a casual examination of the report, we find that there has been treated during the year at the asylum 429 patients; the daily average of patients has been $212\frac{2}{3}$; the number admitted during the year 273, and the ratio of recoveries to the number admitted has been twenty per cent. The total amount of receipts from all sources has been \$70,519.05, and the total expenditures \$68,280.44, leaving a balance on hand of \$2,238.61.

The statistical data as to the causes of insanity and of hereditary transmission are very instructive. We find intemperance an im-

portant factor in the causation of mental aberration, while grief, anxiety, overwork and loss of sleep, some of which are conditions peculiar to the high-pressure life of the American people, furnish a large percentage of cases.

The report furnishes the following instances of heredity :

In three instances a brother and sister were admitted, in one instance two brothers. The following were some of the most marked cases of heredity : a paternal grandfather, two paternal uncles and a brother ; maternal uncles and two brothers ; father, brother and sister, maternal grandfather and two maternal aunts ; mother and two maternal aunts ; and both father and mother.

To our readers, however, the most interesting portion of the report will be found in the following extract, which furnishes the experience of the medical staff of the asylum in the use of hyoscyamine:

As regards the remedies found useful as palliatives in certain states of the disease we desire to record our experience in the use of hyoscyamine. We have found it of great assistance in controlling outbursts of boisterousness and violence which characterize the disease. We have seen no ill effect and nothing like the unpleasant and dangerous symptoms which have been alluded to by some experimenters in the use of the drug. These we believe to have arisen from the unnecessary large doses taken. If the medicine is used at first in minute doses, and then gradually carried up to the point of control only, the desired result will be attained. It is neither necessary nor desirable to prostrate the patient and produce the full physiological effect. The dose of one-twentieth of a grain increased to one-fourth as needed will usually be sufficient. Comparative quiet and repose follow the smaller doses. We have found beneficial results in combining it with morphia and the bromides separately in doses of from one-eighth to three-eighths of the former and x to xxx grains of the latter. In this way the one-twelfth of a grain of hyoscyamine is often sufficient to accomplish the purpose as stated above. The combination is also useful as a hypnotic.

This dose administered in the morning gives several hours of quiet, and ordinarily need not be repeated till bed-time. In some instances hyoscyamine is contra-indicated; when it does not control the excitement and disturbs the appetite it should not be continued, as loss of flesh and injury to the general physical condition result. Trial of the drug only furnishes the criterion of its value in each individual case. In delirium tremens we have employed it in a limited number of cases. A few drops of the solution from the one-twelfth to the one-sixth of a grain given in milk punch proved sufficient to control muscular agitation and procure sleep. We cannot recommend this to the exclusion of chloral and the bromides, opium and other remedies which have an established value in the treatment of the disease, but desire to call attention to it as an additional therapeutic measure. In combination we have given it only by the mouth, while recognizing the fact that it may be decomposed by the secretions of the stomach; this has seldom occurred. The physiological effects have been studied by several observers and their similarity to those of atropia noted, and by some considered identical. The effects of a full dose are rapidly produced and may be briefly stated as follows: Increase of pulse, decrease of respirations, flushing of face, increase of external temperature, loss of motor power, due to paralysis of the motor nerves, profound sleep lasting for some hours. The secondary effects are a numerical decrease in the pulse beats and respiration and a fall of temperature. The most unpleasant effects of the medicine are the dryness of the fauces, the dilatation of the pupils which produces disturbance of vision, and the loss of muscular power. These are sometimes appreciated by the patients and are referred to by them in the order in which they are recorded here. They are rarely so marked as to render the discontinuance of the drug necessary.

It will be observed that the asylum is conducted, in its professional and scientific work, with the most thorough and painstaking efforts and care; that the patients are given the benefit of

the best treatment, disciplinary, medicinal, as well as moral, which medical science can provide, and that the result of the work is creditable alike to the Superintendent, Dr. Andrews, and his able assistants, Drs. Granger and Crego, as well as to the State which fosters and sustains it. We are gratified to be able to give our warmest endorsement to the asylum, and to the excellent work it is doing for science and for humanity.

THE PROFESSION OR THE PUBLIC.

The Board of Censors of the Erie County Medical Society have undertaken, with commendable earnestness, a crusade against certain persons in this city and county, who are imposing upon the credulity of the public by practicing medicine, without either diploma or license, in violation of the laws of the State. The law of 1880 provides that it shall be a misdemeanor, punishable by fine or imprisonment, for a person to practice physic or surgery in this State without legal authority. There can be no question as to the necessity of this law in the minds of the profession, and a general regret prevails that its execution has been so long delayed. Among the people, however, especially among the uneducated, the cry of persecution is raised, and a feeling of sympathy engendered towards those who are thus hindered from carrying on their nefarious pursuits. The public, therefore, may conclude that the doctors are moving in this matter with a view to improve their own interests, without for a moment considering the dangers to which the people are exposed when pretenders, without any show of professional knowledge, are permitted to deal with the responsible work of caring for the sick.

It is one of the peculiar tendencies of our institutions that even the highest and most sacred interests must be brought within the reach of the popular grasp, and no matter how humble or how illiterate the aspirant, the position sought must not be placed beyond his earnest effort. The profession of medicine

feels the influence of this American principle. The ranks have been open to every seeker after professional honor and emolument, and the standard of medical education brought down to the level of the lowliest; and even this has not been sufficient to satisfy the public taste; the bars must be let down entirely and all the cattle allowed to run at large. This picture is not overdrawn. The army of quacks and pretenders in this and other States, who live on the credulity of the people, constitutes one of those marvellous instances of long-suffering and forbearance, on the part of the public, which one would think would expend its force at the very first expression of ignorance, instead of after repeated manifestations of the most lamentable incapacity and dishonesty. The people pay the bill in loss of life, in extortionate demands, in prolonged suffering and chronic invalidism, and yet they would have this same quackery go unpunished for fear that the educated physician may reap some slight advantage through the execution of the law upon the pretenders.

If pecuniary gain be the motive power, the educated physician is the gainer by the prevalence of quackery, and the more widespread the imposition, the greater the amount that comes into his coffers. But the medical profession have always maintained the position that their highest duty consists in serving as conservators of the public health, and they have a broad field of usefulness in protecting the public against the widespread imposition which exists in every community, whereby life and health is sacrificed and suffering entailed upon the unsuspecting and the ignorant.

The law of 1880 was enacted for the benefit of the public and not for the profession. The medical profession is willing to be judged by its merits. If it does not present the best skill, where is it to be found? Do the quacks hold the panacea for ills that baffle the educated physician? Are the long course of study and the years of experience of no importance in estimating the ability of the physician, in deciding the question whether he is entitled to public confidence?

The cry of persecution with a view to excite sympathy for unworthy objects is intended for popular effect. We think the medical profession has the important duty to perform, to use its power and influence to guard life against disease, and to protect the public against those who, through ignorance, trifle with human life. We trust the censors will be encouraged to go on with the good work they have inaugurated.

EDITORIAL NOTES.

A LETTER recently received from our colleague, Dr. Davidson, states that he is enjoying the hospitals of London, and appreciating the advantages there afforded for clinical observation and study. He expects to go over to Paris for a brief visit, and return to Buffalo about the middle of May.

AMONG the evidences of enterprise in the periodical medical literature of this country, the change of the *Maryland Medical Journal*, published in Baltimore, to a weekly publication, is especially to be noticed. This periodical has been one of our most valuable exchanges, and we congratulate the editors upon the increased support which warrants them to make the further venture of a weekly issue.

THE thirty-fourth annual session of the American Medical Association will be held in Cleveland, Ohio, on Tuesday, Wednesday, Thursday and Friday, June 5, 6, 7 and 8, 1883, commencing on Tuesday at 11 A. M. The proceedings of the body are always of great professional interest. The sessions call together the ablest men of this and other countries, and we have no doubt the coming meeting will be characterized by the same earnest effort in behalf of medical science as has been noticed in the past sessions.

WE have received the first number of the *American Psychological Journal*, issued by the National Association for the Protection of the Insane and Prevention of Insanity, a quarterly, edited by Joseph Parrish, M. D. of Burlington, N. J., and published by P. Blakeston, Son & Co., 1012 Walnut street, Philadelphia. Dr. Parrish is assisted by five associate editors. The subscription is \$2.00 per year. The table of contents furnishes contributions from the ablest

writers in this special department of medicine. We commend the journal to those of our readers who are interested in the study and treatment of insanity.

A SPECIAL meeting of the Erie County Medical Society was held at the College Buildings, April 11th, to take action in regard to the bill introduced into the Legislature to establish a State Board of Medical Examiners. The following resolutions were unanimously adopted:

Whereas, The Committee on Legislation of the Medical Society of the State of New York did, at the last meeting of the society, report a proposed bill for the purpose of regulating the licensing of physicians, by the creation of a State Board of Examiners, which Board shall alone have power to grant licenses to practice medicine in this State; and

Whereas, The said State Medical Society did accept the report of the said Committee on Legislation, and did approve and recommend to the Legislature the passage of the said proposed bill; and

Whereas, The said bill is now before the said Legislature; therefore

Resolved, That the Medical Society of the County of Erie hereby approve of the bill, entitled an act to regulate the licensing of practitioners of physic and surgery, now before our State Senate.

Resolved, That it is the belief of this Society that the present system of training physicians does not command the entire confidence of the profession or of the people, and that the changes contemplated in the proposed law will be in the way of improvement.

AN INSTANTANEOUS LIGHT.—Such in a word is the unique apparatus on exhibition at the rooms of the Portable Electric Light Co., 22 Water street, Boston. It occupies the space of only five square inches and weighs but five pounds, and can be carried with ease. The light, or more properly lighter, requires no extra power, wires or connections, and is so constructed that any part can be replaced at small cost. The chemicals are placed in a glass retort; a carbon and zinc apparatus, with a spiral platinum attachment, is then adjusted so as to form a battery, and the light is ready. The pressure on a little knob produces an electric current by which the spiral or platinum is heated to incandescence. The Portable Electric Light Company was recently incorporated, with a capital of \$100,000, under the laws of Massachusetts. The usefulness of the apparatus and the low price (\$5) will no doubt result in its general adoption. Some of the prominent business men of the State are

identified with this enterprise. In addition to its use as a lighter, the apparatus can also be used in connection with a burglar-alarm and galvanic battery.—*Boston Transcript*, Dec. 30.

Reviews.

The Tenth Annual Report of the Secretary of the State Board of Health of the State of Michigan, for the fiscal year ending April 30, 1882. By authority. Lansing: W. S. George & Co., State Printer and Binder. 1883.

The Peninsular State, in its efforts to advance the sanitary interests of its people, outstrips many of older communities in this very important department of scientific study and research. The present volume contains many very valuable papers on sanitary science, which show great labor and study as well as patient investigation. The volume contains the records and papers of two sanitary conventions, the one held at Ann Arbor, and the second at Greenville. Among the writers we find many of the ablest men in the State. Judge Cooley writes a very able paper on "What can the Law do for the Health of the People;" Prof. Lyster, of the State University, on the "Ambulance Hospital for Small Pox;" Rev. Dr. Duffield on "Hygiene and the Clerical Profession;" Prof. J. W. Langley on "Ventilation;" Prof. Prescott, of the State University, on "Food Adulterations," and Prof. V. C. Vaughn, of the same institution, on "Meats." We notice a very interesting paper on "Health of Criminal Women," by Eliza M. Mosher, M. D., of the Sherborn Reformatory for women, which reveals some startling statistics in regard to the criminal class of the fair sex. We quote: "It is safe to say of the whole number committed during the four years, more than four-fifths were intemperate, and more than three-fourths were unchaste. The paper further states that "one woman out of every four committed to the prison was syphilitic." The report is a very valuable record of earnest work in sanitary science. The character of the papers and the high-standing and ability of the writers, show that in scientific circles in that State there is

constantly held in view the relations of *science* to the well-being and happiness of man. We commend such an example to the attention of the profession in this and other States.

A Manual of Auscultation and Percussion, Embracing the Physical Diagnosis of Diseases of the Lungs and Heart, and of Thoracic Aneurism
By AUSTIN FLINT, M. D. Third Edition. Revised. Philadelphia: Henry C. Lea's, Son & Co. 1883.

This work is the product of the author's practical instruction in auscultation and percussion to private classes composed of medical students and practitioners. In the revision for the third edition, the scope of the work originally designed has been restricted to auscultation and percussion, considered chiefly with reference to their practical application, and to present these with as much condensation as possible. We need not assure our readers that Dr. Flint has succeeded in furnishing a manual which the profession has especially prized, and that the present edition, having been carefully revised, is the most valuable work yet published on the important subjects of which it treats.

Student's Guide to Diseases of the Eye. By EDWARD NETTLESHIP, F. R. C. S., Ophthalmic Surgeon to St. Thomas Hospital. Second American from the second revised and enlarged English edition, with a chapter on examination for color perception, by William Thompson, M. D., Professor of Ophthalmology at Jefferson Medical College. Philadelphia: Henry C. Lea's Son & Co. 1883.

This work is essentially a students manual of ophthalmology, and the favor with which it has been received shows its real value in this special department to which it is devoted, and the appreciation of the profession of its intrinsic merits. Dr. Thompson has added a chapter on color-blindness, in which subject his extensive investigations are widely known; with this valuable addition the book becomes the most valuable guide to the study of diseases of the eye yet published. We commend it to the notice of students of medicine, and to such practitioners as desire a condensed treatise on a class of diseases which are frequently met with in daily practice.

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Original Communications.

INTRA-CRANIAL TUMOR.

A CLINICAL LECTURE DELIVERED AT THE HOSPITAL OF THE
UNIVERSITY OF PENNSYLVANIA, JAN. 27, 1883.

BY WILLIAM PEPPER, M. D., LL. D.,
Professor of Clinical Medicine in the University of Pennsylvania.

REPORTED BY WILLIAM H. MORRISON, M. D.

GENTLEMEN—This patient has been sent to us for an opinion in regard to the nature of his trouble. As I have not yet examined him, I shall question him before you and will ask you to carefully note his replies.

He is thirty-eight years of age and has been engaged as a brakeman on the railroad; he had been previously a private watchman. The first evidence of disease was an attack which he had in October, 1880. He had gone to bed about eleven o'clock, and went to sleep. At about three o'clock, he was awakened by a severe pain; he felt a numbness throughout his body and could not move. Thinking it was a nightmare, he asked his bed-fellow to turn him over; he then lost the power of speaking; but still retained consciousness. The legs began to jerk and he felt a numbness beginning in the legs and ex-

tending gradually upwards until it passed out at the top of the head; he then lost consciousness. It took about half a minute for the numbness to pass from the legs to the head. The unconsciousness lasted, he thinks, about ten minutes. On coming to, he was very sleepy; he asked the friends who were around him what was the matter and went to sleep. He did not feel sore, and went to work as usual the next day. He had three other attacks exactly like this one; two of these occurred in the morning before he had gotten out of bed, and one about ten o'clock in the morning. The second attack took place April 17th; the third, a week later, and the fourth, in the following June. In these attacks the eyes rolled and he bit his tongue.

Since then he has had attacks which have been limited to the left side and particularly to the left leg. These are accompanied by numbness, which gradually passes up the limb until it reaches the middle of the body, where it stops, twitching in the muscles of the leg and pain in the left testicle. These attacks sometimes affect the arm. The first of these occurred in June, 1881; since which time he has had a number, probably about ten, coming at intervals of from one to three months. They last for one or two minutes, but in the course of five minutes he is able to return to his work.

During all this time his general health continued good, his appetite and digestion were not impaired and the bowels were regular; there was no trouble with the kidneys; there was no fever, no night-sweats, no malaria, the weight kept up, and his mind was clear.

One day in July, 1882, he walked from his house to the depot, about one o'clock in the afternoon; the day was very hot and he did not take an umbrella. Having gotten to the depot, he walked through his train to the baggage car, but feeling some peculiar sensations, he walked back again and sat down in the last car. He then felt a numbness in the left side and had the sensation of pins and needles, particularly in the left arm and leg. The right side was not affected. He did not fall and did

not lose consciousness. He was taken home, but the numbness and feeling of weight in the limb continued for a day and a half. Every once in a while, a wave would pass through the limb. This lasted but a few seconds. The left hand was a little clumsy. He could not tell where he was going to put it unless he looked.

Since July, he has had very severe headache. He had never had it before. It would come on when he went to work. Looking up, as he was lighting the lamps in the cars, seemed to induce it. It would increase in severity until he had gone to bed and would continue through the night; but after eating his breakfast it would disappear and not return until evening. About August 15th, the headache was so severe that it brought on an attack of vomiting, and since then he has been unable to do any work. At first, the headache was limited to the top of the head; it now shifts its position and comes down over the brows and in the occipital region, and affects both sides.

The memory appears to be not impaired, although he thinks it is not as good as formerly. The hearing is acute. Noises disturb him. There is undue acuteness of hearing. With this, there is a sound on both sides as though something were bursting out through the ears; this seems to keep time with the heart beat, and is worse on lying down. There is then pulsatile tinnitus. During the past two months, there has been failure of eyesight. The vision in both eyes is almost lost, although light is noticed better with the right eye than with the left. He cannot read the largest print, and cannot recognize a person standing before him in a bright light. There is no ptosis. The orbicularis is perfect in its action. The pupils are equal and about normal in size, with a little tendency to dilatation, but there is very little motion on the sudden admission of light after it has been excluded; in other words, the retina is not sensitive.

There is no twitching of the muscles in walking. There is a little giddiness on rising. He can stand as steadily when the eyes are shut as when they are open.

The heart's action is rapid, but entirely free from murmur.

He has been married since December, 1881; has had one child, who died at the age of seven months from "infantile convulsions." Has not been a drinking man; has never had any venereal trouble, and has never received any injury to the head; but four years ago while sitting in a wagon, the horse suddenly started and threw him out at the back. He fell on his shoulders and was stunned for a few moments. In a week he had recovered from the fall. He had no headache at this time. This is the only fall that he has had. (The patient was now removed.)

This is, unquestionably, a case of intra-cranial tumor, non-specific in character, and, as far as can be made out, with no definite connection with any injury. There is, without question, probably near the base of the brain, some growth. The symptoms are too characteristic to admit of doubt.

The diagnosis of intra-cranial tumor is at times excessively difficult; at other times, it is one of the easiest of all diagnoses. That which would lead you to suspect the existence of an intra-cranial tumor, I do not say that on which you would base a positive opinion, but that which would make you suspect the possibility of its existence, would be one of the following, or a group of the following symptoms: Very frequent, causeless vomiting without much nausea; obstinate and severe headache, without apparent cause and not yielding to ordinary remedies, especially if the headache be localized; giddiness on sudden change of position, and in progression, with perhaps some degree of unsteadiness in the gait; convulsive seizures, which may be genuine, general eclampsia, or what is more characteristic, unilateral spasms without loss of consciousness; paralysis of single cranial nerves, and progressive optic neuritis, with failure of vision. Either of these symptoms, if existing without apparent cause and resisting ordinary remedies, should arouse a suspicion of intra-cranial tumor. occasionally you will meet with cases where but one of these symptoms is present; for instance, I saw, a few years ago, in consultation, a young lady who had been

absent from home and had been taken with obstinate vomiting, presumably due to some indiscretion in diet. The vomiting continued despite all treatment. It was rather a regurgitation of what had been taken and of the secretions of the stomach than an actual emesis; there was but little nausea. Some blood was brought up from time to time. Gastric ulcer was finally suspected, but it resisted all treatment for that condition. There was no headache complained of, nor was there any convulsive or spasmodic seizures. The vision remained normal, but later, giddiness and staggering in the gait came on. Consciousness was retained until lost from sheer inanition. At the post mortem, a sarcoma as large as a walnut was found situated in one lobe of the cerebellum. I have seen several cases in which persistent, uncontrollable vomiting, sometimes associated with optic neuritis and giddiness and sometimes without these, was the chief symptom of a tumor of the cerebellum or of the base of the brain.

There will sometimes be convulsive seizures, and especially of the Jacksonian type. These are unilateral or monoplegic spasmodic attacks, without loss of consciousness, and are extremely significant of localized coarse lesions within the cranium. They were admirably described by Hughlings Jackson, and have hence been called Jacksonian epilepsy. This man has had both kinds. He had four of general eclampsia, with loss of consciousness, rolling of the eyes, biting of the tongue and general spasmodic movements, just as in a case of epilepsy. Instead of these continuing and growing more severe, they have been substituted by a totally different sort of spasmodic attack. The latter have been unilateral, limited to the left side and affecting sometimes the leg and sometimes the arm. These are very characteristic. They will be found in cases of syphilitic nodes, gummata of the membranes of the brain and in localized specific pachymeningitis, when the degree of thickening is sufficient to cause pressure on the cortex. They are found in small growths on or near the surface of the brain, involving a certain convolu-

tion, and according to the convolution implicated, will be the locality of the spasm; so that not only can the nature of the trouble be diagnosed, but occasionally the position of the tumor may be determined. In the present case, it is difficult to define the precise location of the lesion, for, as you see, the spasms are not limited to one set of muscles; sometimes they affect the arms, and sometimes the legs. My opinion is that the lesion is rather coarse and extensive.

Pain in the head is one of the most constant symptoms of intra-cranial tumor. This pain is often agonizing, or as this patient describes it, "head-splitting." As you know the pains occurring as a result of specific disease are worse at night, but I have noted in many cases of intra-cranial tumor, even where there was no suspicion of specific taint, that the pain was chiefly nocturnal. The pain may, however, continue day and night. It may be violently paroxysmal, the paroxysms occurring at any time, but frequently at night. It may be strictly localized and bear a relation to the seat of the growth. It is at times compared to the driving of a nail into the brain. It may extend over certain regions, or it may involve the whole head.

Giddiness is frequently met with. It depends upon irritation of the cortex, irregular radiations of motor power thus resulting. There may be more than giddiness; ataxia may be actually present. The gait may not only be staggering, but resemble that of a patient with advanced posterior sclerosis.

Nothing is more characteristic when present, than paralysis of certain cranial nerves, as ptosis of one side. When associated with some of the other symptoms which I have mentioned this is very significant. Local palsies are of course most common when the tumor is on the under surface of the anterior portion of the brain, so as to press upon the nerve after its emergence from the cranial mass. Facial paralysis is not rarely met with.

Lastly, inflammation of the optic nerve, descending neuritis, has since the introduction of the ophthalmoscope become an important sign in the diagnosis of intra-cranial tumors. Progress-

ive optic neuritis occurs in a number of conditions. It may be present in chronic meningitis. It may exist as an independent affection in constitutional syphilis. Hence its existence, while a good corroborative evidence where there are other symptoms of intra-cranial tumor, is not of itself sufficient to justify the diagnosis; nor, on the other hand, is its absence sufficient to warrant the exclusion of the idea of intra-cranial tumor. In several cases of this kind under my care, repeated examinations of the eye-ground revealed no evidences of optic neuritis. The occurrence of optic neuritis depends to a great extent upon the position of the tumor. In certain situations, a tumor would neither interfere with the vascularity of the retina nor set up inflammation of the nerve. Even when optic neuritis is present, the vision may still retain considerable acuteness. The fact that the patient is able to see distant objects, does not suffice to exclude the existence of optic neuritis, for vision may not fail until late. An ophthalmoscopic examination must always be made.

In this patient a considerable number of the symptoms which I have mentioned are present. There has been violent headache, shifting its location, eclampsia, unilateral spasmodic attacks, without loss of consciousness, giddiness in walking and on suddenly changing the position, progressive failure of vision until the man is partially blind, and exaggerated acuteness of hearing. Only once has there been vomiting, and that occurred after an unusually severe attack of blinding headache. We have not yet had an opportunity of having the eye-ground examined, but that will be done. We shall doubtless find advanced retinal and optic nerve changes.

The nature of this growth is of course uncertain. It may be said that it is not specific, for the man's character and record are good and his statements are clear on this point; nor is it the result of traumatism. The fall from the wagon did not implicate the cranial bones and this injury can scarcely be set up as a sufficient explanation of the intra-cranial trouble.

The character of growths which form in the skull are various. Aneurism should always be thought of. In certain cases, the symptoms are so characteristic that you may be able to diagnose that the tumor is an aneurism. The vessel most frequently involved is one of the middle cerebral arteries. You would suspect that the tumor was an aneurism from the co-existence of marked disease of the vessels with some tortuosity and dilatation of the radials and temporals, slight bulging of the arch of the aorta and resistance in the carotid trunks, with the progressive evidences of tumor with paralysis of the facial trunk, which in aneurism of the middle cerebral artery would be likely to be pressed upon. On several occasions, from consideration of these points and the locality of the spasms, I have been able to diagnose a small aneurism of the middle cerebral artery. In rare instances, the tumor is a hydatid cyst. The presence of retinal echinococci may enable the diagnosis to be made. In cases of intra-cranial tubercular tumors, tubercles may be found in the retina. A history of syphilis would indicate that the growth was specific. More frequently we can only say that there is a coarse lesion, a tumor, marked thickening of the membranes of the brain, or an exostosis on the bone.

In this patient I considered that the growth is on the right side of the brain, that it is near the base, and that it is somewhat toward the anterior portion of the cranium. As to its character, I have nothing to offer, but I believe it to be a solid growth.

As to the prognosis you can judge for yourselves. There is no reason to prescribe specific treatment. There is no reason to trephine, with the hope of removing an exostosis or coming upon a sub-periosteal abscess. The treatment is simply palliative, and is to be directed to relieving the headache and regulating the functions, but without any expectation of permanently influencing the progress of the disease. It is a distressing thing to have to formulate so fatal a prognosis, but I do not see how we can form any other opinion.

When I again meet you, I shall give you the results of the examination of the eye-ground.

The following is the report of the ophthalmoscopic examination made in the above case by Dr. S. D. Risley :

Right eye. Margins of nerve entirely hidden ; location only seen by converging vessels. Macula apparently emmetropic. Upper part of disc most prominent. Upper temporal vein seen best with + 4.5 D. Numerous minute extravasations on the surface of the disc, but none elsewhere. White striations radiate from the nerve above and below. The veins are full and tortuous. The arteries are small and often missed from emptiness or from being lost in the retina. The upper temporal vein curves down and dips into the retina and is hidden from view one-half disc-diameter from the border.

Left eye. Upper temporal vein +4 D. Extravasations on nerve surface ; greater opacity, the whole presenting a whiter and more striated appearance. Veins less full than on the other side. The arteries are even smaller and more empty and in many places dissappeared from view. Macular region apparently emmetropic. No extravasations except on disc and these absorbing. Neuritis probably commencing. No retrograde changes.

CONTAGIUM ANIMATUM.

BY FREDERICK PETERSON, M. D.

We have a number of diseases which have the following peculiarities: They are general systemic diseases, that is, their effects, though partly local, are manifested upon the whole body of the individual. They are peculiar in that they are infectious or contagious, or both. They are communicable from one person to another. By touching an individual affected, by breathing the air he breathes, by touching anything he has worn or touched, even by passing his house, one is attacked by an insidious and virulent disease. To this class are to be reckoned

scarlatina, small-pox, diphtheria, measles, septicæmia, cholera, yellow fever and other such specific, infectious diseases. Intermittent fever, though not contagious, is one of this class. All these form an entirely distinct group, differing in every respect from any of our other diseases. There is a sharp boundary line between them and such diseases, for instance, as rheumatism caused by exposure to cold and the common inflammations, such as pleurisy, nephritis, or hepatitis. They have nothing whatever in common.

Now let us look for a moment at the etiology of this strange class of specific, infectious diseases, which have puzzled us for ages.

These diseases must have some cause. That cause has been laid to changes in the atmosphere, of temperature, density or quantity of moisture. But many of these diseases prevail at any season, cold or warm, in any climate, in any density of atmosphere, near the level of the sea or on high mountains, in low, damp countries or in regions high and dry.

So the condition of the atmosphere has little to do with it. It has been supposed that poisonous gases in the atmosphere, arising from the earth or from decomposing organic substances, might cause these diseases. But no traces of such gases have been found, and none of the poisonous gases we know resemble in any particular such a gas as is suspected of being a cause of these specific, infectious fevers. But there is another factor to be looked at carefully when reasoning with regard to the cause of these diseases. Let us take septicæmia as an instance. You put a needle into your finger when sewing up a body after an autopsy. At this minute point, hardly perceptible on your finger, has something—call it a poison if you will—been introduced, which gradually extends from there, infects your whole system in a few hours or days, raises your temperature to $103-4-6^{\circ}$, your pulse to 120-40-60. Abscesses may form in your axilla, in all your joints, fatty degeneration of the heart may take place, inflammation of lungs, liver, kidneys,

and of all the serous membranes, and then death occurs. But now a minute drop of your blood introduced into another will cause that other individual to undergo the same fatal septicæmia, and from him can another be inoculated in the same way, and so on through twenty-five different individuals, and still the virulence of the poison is as great as ever, and one minute drop of blood from the twenty-fifth individual is capable of destroying still others. This is not a matter of supposition, but of actual experiment in lower animals. How does this compare with the action of any of our poisons?—take even our strongest, say wourara or strychnia? To be sure, a certain, fixed and minute quantity of these will produce rapidly a fatal termination, but it still remains the same quantity of poison, and any of the blood of that person will not poison another, except in the proportion of its dilution. For instance, if $\frac{1}{2}$ gr. of strychnia kills a man on being absorbed into the circulation, it remains a $\frac{1}{2}$ gr. but diluted by some sixteen pints of blood. Hence a drop of that blood is entirely incapable of producing a fatal result in another. This brings out the distinctive point. The poison of the septicæmia is altogether different, for it has the faculty of increasing and not being diluted. In other words the poison, whatever kind it is—in septicæmia, in diphtheria, in small-pox, in scarlet fever, in cholera—*grows*. That is the chief point to remember, the characteristic that *this poison grows*. We know of nothing *in-organic* which has this power of increasing. It is something having life, organic, self-propagating. Hence the theory known as the “Germ Theory,” which supposes these specific, infectious diseases caused by inferior organisms which find entrance to the blood, through wounds, through the alimentary canal, through the delicate pulmonary mucous membrane, and even through the skin. There growing, propagating, they excite inflammation, they rob the blood of some of its constituents to feed themselves. We have now shown that this “Germ Theory” is no fanciful device to cover up ignorance, but that it rests on a strong basis of common sense and reason.

Even if the microscope were not invented, and we knew nothing whatever of these microscopic beings, our reason alone, by mere induction, must lead us to a firm belief in a living and unseen contagium or parasite. And it did so, even two thousand years ago, for the Roman physicians gave credence to a parasitic theory of specific diseases.

But since then our beliefs have gained still stronger foundation. These germs are not imaginary. Even in our perfect health our bronchial tubes teem with different species of lower organisms. We need but to scrape our tongue with a knife blade, examine what is removed under the microscope, to find it swarming with the small slender rods of the *leptothrix* and alive with the rapidly-whirling spirillum, and the spores of *oidium albicans*. Any time you may examine bronchial secretions or the contents of the stomach, you will find them full of minute organisms of various species. The intestinal canal in every person is thronged with millions of them. The water we drink, the air we breathe are crowded with them. They are all parasites, every one, from the small dot-like microcosms to the branching, tree-like mildew. They cannot live without feeding upon organic matter. Put a piece of apple anywhere in a damp, warm place; it will soon be covered with a forest of mildew plants. Let a little milk stand in the same kind of a place; it will soon sour from the presence of the multitude of minute germs of fermentation.

But, it may be said, "Granted that these germs are everywhere present in countless myriads, which the microscope has revealed to us as true, have these minute creatures the power to produce such great results as the destruction of a whole community of human beings? Have they any power at all?" The answer is this: Pasteur has demonstrated that these bacteria are the chief cause of the alcoholic fermentation. It is known that they, in the shape of yeast, leaven our bread. They are more powerful than maggots in the destruction of carrion, for they are necessary to all decomposition; hence they may be said to bury our dead. A mighty power for good or evil cannot be denied to those ani-

mals, which, unseen by us, leaven the bread of millions of the people, make all the alcohol consumed in the world, give arrack to the Hindoos, make all the wine of France and Spain, all the beer of Germany and America, and virtually eat up millions of dead animals every year. Now, let us review a little: these diseases are infectious, contagious, epidemic—whatever the poison is, it grows and consequently is organic—these organisms were too small to be seen with the naked eye, hence at first their existence was but suspected; the microscope has discovered the presence of these germs everywhere in myriads; we have found them essential to decomposition and fermentation; later it was found, and proved beyond doubt, that they are absolutely the cause of diseases in numerous plants and lower animals. In 1838, for instance, the disease of the silk-worm, known as muscardine, was found to be due to fungi. But the most important discovery was that made by Pasteur, with regard to the silk-worm disease known as *pébrine*. For fifteen years the silk-worms had fallen victims in multitudes to the plague. The production of cocoons had fallen from 52,000,000 pounds, in 1853, to 8,000,000 in 1865. This was a dreadful blow to the silk industry in France. Everything in the pharmacopœia was put under contribution to prevent or cure the disease. It was found soon that the blood, all the tissues and even the eggs of the silk-worms, were full of minute vibratory corpuscles, which, indefinitely multiplying, caused the death of the insect. Pasteur experimented this way: He took a diseased worm and rubbed it up with water, spreading this out on mulberry leaves, with which he fed healthy worms. These last all became diseased from eating the corpusculous matter. After many such trials, he *proved* that it was this definite organism which caused the disease. Then he went to work to choose healthy eggs from the diseased worms, and gradually, slowly, but surely, the French, under his directions, have restored the old silk industry to its former proportions, and rooted out the fatal malady, *pébrine*. But to go from lower animals to man; it has been *conclusively* demonstrated

that some human diseases are due to lower organisms. A fungus was found to be the cause of the skin disease known as favus or porrigo, and another to cause herpes tonsuraus, and still another to cause pityriasis versicolor. As to the specific fevers, it has been proved that in splenic fever of cattle the blood always contains bacteria, and that in this disease they are, at least, the cause. Soon after this, bacteria were found in most of the septic group, in pyæmia, septicæmia, puerperal fever, diphtheria, in vaccinia and small-pox. Then we had the weighty discovery of the spiral bacteria in the blood of patients with relapsing fever. Still later, the constant presence of bacteria was verified in cholera, endocarditis ulcerosa, scarlatina, and within a few months they have been discovered in tuberculosis and syphilis.

Still we are not satisfied; we must have positive, undeniable proofs, before we give the germ theory credit. The difficulty lies not in proving their presence in these diseases, for that has been sufficiently demonstrated, but in determining whether they are cause or effect. Do they really precede and give rise to the disease, or are they there because, when diseased, the body becomes a proper soil for them to grow in? What is the difference between those bacteria which are present in scarlet fever and those in small-pox? But here we stand on the border of that region which is all darkness, even to our microscopes. The bacteria of one septic disease seem precisely of the same form as those of any other. We have a single exception in relapsing fever where they are spiral. What are we to do? We cannot make our microscopes any better. Yet, though we cannot distinguish between bacteria of one fever and those of another, it is equally true that we see no difference between cells, which in one case become nerves, in another muscle, in another bone; indeed, I might say which in one case become men, in another case oxen or rats, for these cells, too, are apparently the same. But the truth is we must not think there is nothing more to see because our microscopes do not reveal more. It is probable that there

are more startling things than we dream of to be seen with more perfect lenses. We know but little of the structure of the bacteria and their method of generation. Some suppose they proliferate by division, as do cells, but if they multiply as some other and larger vegetable parasites do, such as the common mildew, by throwing off of spores, then the bacteria being just visible with the microscope, their spores would be completely invisible. These spores, far out-numbering even the bacterian myriads, unseen to us, thronging the atmosphere everywhere, may be the carriers and originators of the disease, and only in their adult form become perceptible to us. This is beyond the power of the microscope. With a lens magnifying 500 times we can see quite plainly a bacterium $\frac{1}{3200}$ of an inch in length, and this is about the size of the bacillus of tubercle. With a lens magnifying 5,000 diameters there are still other germs to be seen, some reckoned by Beale to be $\frac{1}{100000}$ of an inch in diameter. The microscope cannot go much farther. But Tyndall has startled us with an instrument which reveals the presence of these motes when there is nothing to be seen with a magnifying power of 15,000 diameters. This instrument is a beam of electric light. With this he has searched the purest water and air and found in them these tiny particles far beyond the reach of the microscope, from which in time bacteria developed. It is proposed now to make a distinction between the words *germ* and *bacterium*. *Germ* is limited to these marvelously minute spores from which the bacteria develop. *Bacterium* is the adult form.

All sorts of experiments have been made with bacteria to separate them from the tissues, by filtration, freezing, by dialysis, in order then to test the infectious power of the tissue without bacteria, and the action of the bacteria themselves. For the same purpose chemicals and heat have been used. But the *germs* can outlive boiling, freezing, can pass through the strongest acids and filters—*they* can endure what is death to them in the adult

bacterian form. Hence in liquids, boiled for hours, finally from the germs bacteria developed, and many thought this to be spontaneous generation, or development of life from inorganic, dead matter. Most of the septic poisons are peculiar to the human body alone; hence, experiments cannot be carried out upon lower animals.

It has been essayed to change the character of poisonous bacteria by cultivation in different fluids, and some success has followed these experiments in the hands of Pasteur and others. For instance, out of the bacteria of splenic fever, Pasteur claims to have made harmless bacteria by changing the chemical character of the fluids which contained them; and further, that by inoculation with these harmless bacteria but slight change is excited, and attacks of real splenic fever warded off. It is claimed that the small-pox bacteria are thus changed in passing through cattle, becoming quite harmless in the vaccine virus. None of these statements can be said as yet to have been satisfactorily demonstrated.

Another question to be answered is, suppose the bacteria are the cause of the disease, *how* do they cause it? It is thought by a very few that the bacteria themselves are poisonous; others believe they act by taking from the body the material necessary for its nourishment, that they use the oxygen of the blood, and still others think they give rise to a process in the blood similar to fermentation.

But, however they may act, the character of these infectious diseases, the necessity for a living and growing poison, the demonstrated presence of these bacteria or their germs everywhere, seem to me to make absolute truth of the statement that they are the cause of these diseases.

Clinical Reports.

SCIRRHOUS CANCER OF RECTUM IN A BOY 18 YEARS OF AGE.

BY HERMAN HAYD, M. R. C. S., ENGLAND.

A few weeks ago, I was called to one of the neighboring towns to see a young man supposed to be suffering from chronic diarrhœa. He was pale, anemic, and very much emaciated, and sat with his legs elevated above his head upon his tuber ischii. His face was drawn and anxious and indicative of much suffering. The clinical history is briefly as follows :

About one year and a half ago, he commenced to complain of some uneasiness, which at times amounted to slight pain upon stool, and he occasionally noticed streaks of blood in the motions, when his bowels were constipated. This condition continued, but yet attracted very little attention, until six months ago, when he was suddenly seized with a violent and nearly fatal hemorrhage. The bleeding was arrested, he was confined to his bed a few days, and then resumed his work, apparently feeling quite well. But the pain upon stool increased, repeated hemorrhages occurred, attacks of constipation, alternately with diarrhœa, accompanied with great tormina, and tenesmus set in, making these last few months of life wretched and miserable; no bladder symptoms. Upon palpation over the ischiorectal region, a deep, firm, hard mass was to be felt, firmly adherent to the adjacent skin and cellular tissue. Protruding through the anal orifice was to be seen two or three small, but very hard masses, nodules, resembling a healed or thrombosed hemorrhoid. Chloroform was administered and the rectum thoroughly examined. The sphincters were found to be much thickened and infiltrated, although still possessing contractile power. After passing through the internal sphincter, the whole rectum seemed to be one mass of cancer, thickened, immovable, and all over studded with prominent, hard, cartilaginous, irregular nodules.

About the junction of the second and third divisions of the rectum, was a very definite structure, with irregular, rough and infiltrated margins, with an opening large enough to admit the index finger. Above this structure the bowel was very much dilated, fixed, and apparently infiltrated up to the sigmoid flexure. Upon removing the finger at least half a pint of a dirty, greenish, semi-gelatinous, stinking fluid escaped. By deep palpation over the left iliac region, a resisting mass could be felt, and the mesenteric and lumbar glands were found to be enlarged. An interesting feature about the case was this, that notwithstanding the large size of the growth and the involvement of the abdominal lymphatic glands, still, those in the groin along poupart's ligament, and beneath it, and those in Scarpa's triangle were unaffected. Here clinical observation demonstrates what we know to be anatomical facts, and points out for us the course of the lymphatic vessels. Had the growth involved the penis, the inguinal glands would have been enlarged as the lymphatic vessels of the penis empty into these glands; while on the other hand a malignant growth of the rectum does not involve these external glands until the cutaneous surface or superficial parts of the perinæum or scrotum are affected. The treatment suggested was only palliative, abundance of nutritious and easily assimilated food, gentle laxatives and morphia "ad libitum," to soothe pain, and make a most miserable life as free from pain and suffering as possible. I advised that the nurse should have beside her a hypodermic syringe, and inject a quarter of a grain of morphia, or more, just before a motion of the bowels was expected, and thus lessen the excruciating agony suffered by these patients at this time. Lumbar colotomy was deemed impracticable. This case appears to me to be a most instructive one, and from which some practical deductions can be drawn. *First.* Let us not permit ourselves to treat a so-called chronic diarrhœa or dysentery for months without repeatedly examining the lower bowel, and if necessary with the assistance of an anæsthetic. *Second.* Let us not be too

sanguine of the possible non-existence of malignant tumors during youth and adolescence, for autopsies have upon several occasions revealed cancerous masses in various organs, even in very young children. *Third.* Let us not think that a history of heredity is always necessary before we can feel satisfied with a diagnosis of cancer or other allied affections, because one sees many cases of cancer and tubercle where no such history can be obtained. *Fourth.* For any suspicious tumor operate early, and if it returns operate a second or third time, because many of the semi-malignant or sarcomatous tumors seem to lose their malignancy after repeated extirpation. Of course the converse is sometimes equally true, that they seem to recur with increased malignancy.

Much might be said upon the etiology of malignant growths in general, but I shall leave this part of my subject for a future communication.

Foreign Correspondence.

LONDON, May 8th, 1883.

DEAR JOURNAL—I am writing this letter in the British Museum Library, and this reminds me of a bit of practical advice for any of your readers who are contemplating a trip to London: It is to bring few or no books with them; either here or at the college libraries, any book wanted for reference can be readily obtained. Heavy baggage is a source of continual vexation and expense to the traveler in Europe.

This grand library deserves a word of mention, for to the mere sight-seer it is one of the sights of the world, and to the scholar it is eminently attractive. Indeed, I pity the man who can stand under this great dome unimpressed. He is surrounded with the records of all that mankind has done, thought, gained, or been, and as it were with the souls of all the wise, great,

good, and glorious among the sons of men who have gone before him; as Milton says, "Books are not absolutely dead things, but do contain a progeny of life in them, to be as active as that soul whose progeny they are;" and as we look upon the living men in earnest study of the wisdom here stored up, we are reminded how much the authors of to-day are indebted to the thoughts and work of men whose books live after them. The reading room is circular, surmounted by an immense dome, larger than that of St. Paul's at Rome. The great circle of wall is entirely filled up with books as high as the spring of the dome. Light gilded galleries run around the interior, providing easy access to the books. The light, which is abundant, comes entirely from windows in the dome.

The building contains three miles lineal, of book cases, eight feet high. Assuming them all to be spaced for the average octavo book size, the entire ranges form twenty-five miles of shelves.

Gold and light colors have been employed in the decoration of the interior of the dome and walls, and the effect is exceedingly bright and pleasing; all glare is avoided by admitting the light through opaque glass; at night light is supplied by the electric lamp. The floor is covered with a compound called, here, "kamptulicon," which serves so well in deadening the sound of foot-falls that, although about 300 people are usually present, there is no annoyance from noise.

The catalogue fills two concentric circles of low shelves around a raised enclosure in the centre of the reading room which is occupied by the superintendent and his assistants.

Taking one's seat at the convenient tables which fill the great circle of floor, one can quickly obtain any books desired from the immense collection of two million volumes which the library contains.

Perhaps from its proximity to the museum, Americans who take up their residence in London for a few months seem to gravitate towards Russell square; certain it is that from the numerous boarding houses which occupy the streets leading off

that pretty plat of green, daily emerge a colony of Americans in quest of knowledge, mammon or pleasure, as the case may be. So far, we have all escaped arrest if not suspicion of being "Dynamite Fiends," who might mysteriously blow all London to flinders. The "Doctor," who now languishes in a "British Bastile," did not take up his residence in our neighborhood, and does not seem to have interested himself in medical affairs.

The popular alarm has now considerably abated, but after the explosion at the government buildings the wildest notions prevailed as to the destruction which the agents of the "Dynamite Party" might accomplish, and the crazy utterances of the cowardly reprobates who, under the safe protection of the American Eagle made their wild threats, received an amusing attention.

Russell square is also an advantageous location for medical men in that many of the great hospitals are within easy distance. The London Hospital, however, the largest and in many ways the most worthy of frequent visits, is in White chapel, four miles away. The distance, however, should not deter the medical visitor to London from an attendance at its wards.

Every other afternoon Hutchinson, whose reputation here as a surgeon and teacher is unsurpassed, makes his rounds, and I may venture to say that in no English speaking country will so large a number of cases be seen as in his service, which extends usually from 2 to 5.30 P. M.

Andrew Clark, Hughlings Jackson and Sutton, are among the physicians, and as specialists, there are good men in each department. There are over 800 beds in the hospital, and they are all free.

The annual expense of maintenance is \$250,000, and this great sum is met almost wholly by subscriptions, there being no endowment as in many of the others. St. Thomas, Guy's, St. Bartholomew's, own much real estate and other property, which yields so large an income that they are practically independent.

But I promised in my last to say something of the "special" hospitals, some of which are indeed worthy of notice. There is hardly a department of medicine unrepresented by its special hospital.*

There are fifteen for diseases of women and lying-in; five each for diseases of the nervous system, chest and throat, eye and ear; two for cancer; seven for diseases of children; one for diseases of the rectum; one for diseases of urinary organs, and four each for ophthalmic and orthopædic cases. Some of these hospitals are very large, and the specialist, in any department, will find in London abundance of cases.

For the study of diseases of the chest, one need not ask for anything better than the opportunities to be had at the hospital for consumption, Brompton. This consists of two splendid buildings with a pretty garden attached, and contains 347 beds, which are always full.

Dr. Symes Thompson is the senior physician, and of high reputation here, though I think unknown in America. I can not say that one can learn much as to treatment, for notwithstanding the immense opportunities which such an institution presents for deep and sustained study of a malady which has so far defied our skill, we find here the same old routine of treatment, followed by the same success.

It may perhaps be thought that any advantages to be gained by the superior knowledge of the disease in such a hospital is more than counterbalanced by the evil incurred in bringing together in the same wards a number of persons suffering with phthisis, but the admirable ventilation and construction of the building must reduce that danger to a minimum.

Each ward is provided with a fireplace and windows on three sides, but independently of these 4,000 cubic feet of air to each patient is hourly introduced, a uniform temperature being obtained by causing the air to pass over coils of pipe containing hot water. The vitiated air is drawn off through extracting flues, built in the wall, which lead into large air ducts beneath the roof,

terminating in four towers heated by steam coils forming the exhausting chamber. This plan of ventilation gives entire satisfaction, and has been adopted after a long trial of other systems.

You will not wonder at my surprise at learning that during the last year 1,044 gallons of cod liver oil had been prescribed and dispensed, and in addition 825 gallons of various alcoholic stimulants. It was a relief to find, however, that this had not all been swallowed by the poor in-patients, the out-patients, of which there are nearly 8,000 annually, taking their quota.

Every afternoon from 12.30 to 4 o'clock, out-patients are seen; there is always a crowd of them; and every variety of lung and heart disease comes under one's stethoscope.

When one knows the miserable condition in which the poor of London live, the vitiated atmosphere, over-crowded and ill-constructed dwellings and work shops, located in narrow lanes far from the parks and other breathing places, wonder at the prevalence of phthisis and other diseases, ceases.

The mortality from phthisis is fearful enough, the registrar general's last report showing that of the 60,000 deaths occurring in the metropolis, about 7,500, or one-eighth of the total mortality at all ages, and a little less than one-fifth of the mortality of adults, arises from this disease.

St. Mark's Hospital, for fistula and other diseases of the rectum, is, I am told, the only hospital in the world devoted solely to the treatment of this class of diseases. Its wards are commodious and always well filled with patients, and a great number of out-patients are also treated. There are three excellent surgeons connected with the hospital. Of these Allingham is one. His name is so well known through the immense circulation which his book on diseases of the rectum has attained, that he always attracts a large number of medical men to witness his operations.

In his work, after a review of the various methods of operation for internal hemorrhoids, he strongly recommends operating by the ligature, which he says is the "safest, easiest and

best." I was surprised, therefore, to see the ligature discarded and the clamp used in every case.

In explanation he said that it was only recently that he had given the preference to the clamp, or rather, *crusher*, which he now employs. When the last edition of his book appeared, he had used it less than fifty times, and on that experience did not feel justified in unqualifiedly commending it. He had now employed it in over 300 cases without a death or even a single complication.

In using it, the patient being fully anæsthetized, he always completely dilates the sphincter muscles. The hemorrhoids are then taken up, one by one, drawn down and separated from its connection with the muscular and submucous tissues upon which it rests, with a pair of strong scissors.

The cut is made where the skin meets the mucous membrane, and is carried up the bowel and parallel to it, so that the pile is left connected by an isthmus of vessels and mucous membrane only. The crusher is then applied, screwed up tightly, and allowed to remain one minute. He never has hemorrhage. The after-treatment is as described in his book.

The one hospital devoted to the treatment of genito-urinary diseases is called St. Peter's Stone Hospital. This institution has lately taken possession of a new and fine building, and seems to be well supported. Notwithstanding its name, operations for stone are not very frequent; when they do occur lithotripsy is employed, by preference in all suitable cases. To those interested in the study of the treatment of strictures, this hospital is attractive, as a greater number of cases can be seen here than elsewhere in London. Coulson and Bruce Clark are the chief surgeons. In all cases of stricture, simple dilatation is always first tried; the flexible French bougie with tapering and bulbous ends is always employed. Next to this in favor comes continuous dilatation, followed, if necessary, by internal urethrotomy.

A modification of Maisonneure's urethrotome is employed, but my prejudice against that instrument is rather increased than

diminished, by observing the results obtained by its use, even in such experienced hands. With Sir Henry Thompson's and other modifications of Civiale's instrument, the surgeon can control and regulate its powers according to the necessities of the case, and thus ensure a complete division of the stricture. As Sir Henry Thompson says: "If an incision of a stricture is required at all, it is essential that the whole of the obstructing fibres be divided. The cases of relapse are those in which the incision failed to cut the most elastic and yielding fibres, which at no distant time show their presence and reproduce contraction."

Divulson I have not seen performed here at all, Thompson limits its application to stricture within the bulb. At this hospital one sees also an immense number of cases of syphilis, gonorrhœa, etc., but there is nothing noticeable in the treatment, the ordinary routine being followed.

To those interested in dermatology, London provides admirable opportunities.

In addition to the four "Skin Hospitals," every general hospital has its special department for diseases of the skin, and one may, if so disposed, spend every afternoon and two entire mornings of each week in seeing such cases, and observing the treatment employed by men of great experience. Of the teachers here, I am disposed to rank Liveing first, though Crocker, Sangster, Warren Tay, S. MacKenzie, Fox and Morris, are all good. MacKenzie, who is at the London Hospital, always has the largest number of cases, about two hundred, usually; but this is a disadvantage, because to get through in any reasonable time he is compelled to "rush" his patients, and there is little time for observation of any case which interests one.

It is his custom, in cases of alopecia areata, to paint on cantharidal collodion, full strength, to every bald spot. It does not cause as much pain as one would expect, rarely blistering very severely, but I cannot learn that he has any better results than those who employ milder stimulation. Psoriasis is very common here, coming next in point of frequency to eczema. Of the

vegetable parasites, the trichophyton is most abundant. *Tinea Tonsurans* is surprisingly common, one of the results, as it is said, of the operation of the new law making the attendance of children at school compulsory. *Pityriasis Versicolor* and *Favus* are but seldom seen. *Pediculi* and even *acari* would seem to find an almost undisturbed home on the persons of a certain class of English people; at least they endure their presence till in a frightful condition before applying for even free medical advice.

At the last meeting of the London Dermatological Society, Mr. Hutchinson presented a case of *Rhinoscleroma* which attracted much attention, as the disease had not been hitherto seen in England; Hebra and Kaposi report, in all, thirty-five cases. It has, I think, never been seen in America. It is a new growth of the skin and mucous membrane of the nose and contiguous parts, characterized by the formation of circumscribed nodules, papules and tubercles, painful upon pressure, slowly enlarging and becoming, finally, as dense as ivory. The disease, in this case, began two years ago as a papule upon the septum of the nose without inflammatory symptoms. It now involves the whole of the nose and upper lip and gum, and corresponds in every respect to the description given by Kaposi, both in its progress and present appearance. Unfortunately it is a disease in which treatment has been found of little avail. Excision by the knife and destruction by caustics have been only of temporary benefit, as the growth is soon reproduced.

Dr. S. MacKenzie presented a case for diagnosis, a woman whose face was covered with innumerable minute papilliform excrescences. It was generally recognized as a case of *verruca plana*.

Dr. Sangster showed a case of *tinea unguis*, the microscope clearly showing the presence of the trichophyton in the scrapings from the nail. Dr. Fox brought forward a patient whose nails were similarly affected.

Dr. Crocker presented a case of diffuse generalized *Telangiectasis*. In happy contrast, Dr. Fox showed a case of *capillary nævi*, the lesions appearing over a considerable portion of chest and,

limbs. A case of lupus, in which the diagnosis was not easy, and several other more common cases, were also presented.

The meetings of the medical societies here are usually well attended. The discussions are not as well sustained as one would expect from the vast opportunities for observation and study which the medical men of London have. At some of the societies the members usually appear in full evening dress, and at all of them coffee, tea and other refreshments are served. During the winter months, several interesting courses of lectures have been delivered by eminent men before the Royal College of Physicians. To one accustomed to republican simplicity it is odd enough to see the formalities which attend the delivery of these lectures. At the appointed hour a procession of the "fellows" of the society make their appearance in the amphitheatre, preceded by a stalwart servant in livery bearing aloft an immense brass mace surmounted by a crown. The lecturer comes in at the end of the procession, wearing a bright red gown. When all have taken their places, the mace is laid upon a table in front of the lecturer, who then proceeds with his discourse. I have had the pleasure of hearing several of these lectures, but as they have been published in the *Lancet* and other weeklies, I need not further refer to them; indeed, I feel that I already ought to apologize for the length of this letter.

A. R. D.

Selections.

TREATMENT OF TYPHOID FEVER BY ANTISEPTICS, ESPECIALLY CARBOLIC AND SALICYLIC ACIDS.

A communication by M. Vulpian to the Academy upon the treatment of typhoid fever by salicylic acid is of the most interesting character. It is an accepted belief that typhoid fever is an infectious disease, like others, with a parasite in the blood which all efforts to overcome have heretofore been vain.

The treatment by quinine, formerly highly recommended by Bean, is now almost forgotten. Sulphate of quinine is, however, one of the most powerful antiseptics. Attention was again called to this fact last year by M. Hallopean. The phenic acid treatment has awakened an enthusiasm which to our mind seems excessive. Indeed, in a recent discussion before the *Societe Medicale des hopitaux*, we observed that now those who had most eagerly accepted the medication by carbolic acid had abandoned it on account of the dangers it involved. On this account M. Siredey, for example, announced that he no longer gave phenic injections except to modify the fetidity of the stools, and immediately after, having given a carbolic acid injection, he gave a large injection of water to cause its evacuation before its absorption. Carbolic acid intoxication is a dangerous phenomenon, and it has always been a matter of astonishment to surgeons to see physicians prescribing internally carbolic acid with an amazing liberality, while they, always on the lookout for absorption by the skin or by the surface of wounds, are constantly busy with the inconveniences of this precious antiseptic.

I may add as a corollary that a number of times I have observed in patients treated medically with these poisons that it has been easy for me to recognize the symptoms at the outset, so familiar have I become by long experience with the action of phenic acid.

All are agreed, however, whether it is true that the acid lowers the temperature or not, that it modifies in no particular the progress of the disease.

M. Vulpian has experimented with other antiseptics, and has employed iodoform, salicylate of bismuth, boric acid and salicylic acid.

Iodoform, boric acid as much as 12 grammes a day, phenate of soda as much per diem as 9 grammes were given without result.

Salicylate of bismuth, 12 grammes a day, lowered the temperature, disinfected the stools, and brought about general

improvement, but caused dyspnœa, nasal and intestinal hemorrhages.

M. Vulpian then gave salicylic acid in powder, adopting a very simple form of administration, 25 to 30 centigrammes in wafers every two hours up to 6 or 7 grammes in the twenty-four hours; each dose should be followed by the ingestion of a liquid, either water or wine. In general the medicine was well borne.

The only accident which seemed to him attributable to the salicylic acid was a little delirium. He met with neither dyspnœa nor hemorrhage. The result was a lowering of temperature as with phenic acid, but more persistent. The general condition was very favorably modified, but the duration of the sickness did not seem to have been materially influenced. M. Vulpian concludes, then, that, without constituting a curative agent of typhoid fever, salicylic acid exercises upon the disease a moderating action of sufficient power to merit a place among the best modes of treatment. He asks the question whether this substance might not be employed as a prophylactic, and whether this substance, incapable of neutralizing the poison when once the system is invaded, will not act to ward it off. It is well known that a healthy man has very well borne 2 grammes of salicylic acid a day.

In the course of the discussion, M. Bordeaudat appropriately called attention to turpentine, a very powerful antiseptic agent, very diffusible and unfortunately neglected in the midst of all these researches.

In conclusion, it is a question which remains to be studied. It is impossible to deny that antiseptics have accomplished something, and agreement upon this conclusion will certainly be reached, if it is not forgotten that antiseptics have very different elective actions and act very differently upon the different micro-organisms. But at any rate, the reader will be struck by this proposition of salicylic acid administered daily as a prophylactic, when it is taken into consideration that it has only been a short time since the employment of this salt was condemned in un-

measured terms. Salicylic acid attacked us on every side, it was said; it is a most dangerous poison, and it endangered, even when administered in the most insignificant doses. The wisest have always thought that there was a singular exaggeration upon this point, and that it was best to limit the employment of an article little enough objectionable, provided it was not ignorantly abused.—*Journal de Medicine et de Chirurgie Practique.*

SYPHILITIC RE-INFECTION OF HUSBAND AND WIFE.

The London *Medical Record* says that Dr. C. Pellizzari, of Florence, reports the following case (*Lo Sperimentale*):

About the middle of December, 1880, a healthy-looking married man, about fifty years of age, consulted Dr. Pellizzari for phimosis, with discharge from beneath the prepuce, and enlarged inguinal glands, which had followed a suspicious intercourse some days before. Induration of the corona subsequently became well-marked, and in due course a macular syphilide appeared, having been preceded by osteocopic pains. The man, on being told that he was suffering from syphilis, remarked that he had suffered from venereal sores ten years before, and had also at that time infected his wife, who, a few months afterwards, during pregnancy, had suffered from general debility, headache, and moist papules of the genital organs. Her child also showed signs of syphilis soon after its birth. Further and positive evidence of the wife's infection was obtained from Professor P. Pellizzari, who had attended her in 1873 for syphilitic perforation of the septum nasi. On February 2, 1881, she was examined by the author, and found to have an indurated sore of the fourchette and enlarged inguinal glands; a month later a maculo-papular syphilide appeared. The two attacks of syphilis in the case of the wife are thus clearly proved; but as regards the husband, the evidence of the former attack appears to rest on the fact stated by the man himself, that he had ten years previously con-

tracted venereal sores after suspicious intercourse, and on the proof of subsequent syphilis in the wife and child. The husband appears to have suffered so slightly on that occasion, that he did not think it necessary to obtain medical advice. In connection with this it may be mentioned that, in the later attack, when he was under the author's observation, the general symptoms were mild in degree; while the wife suffered severely from recurrent eruptions, nodes, etc., although she had been almost continuously under treatment during the preceding ten years.—*Med. & Surg. Reporter.*

OLEORESIN OF MALE FERN: INCREASING ITS EFFICACY AGAINST TAPE WORM.

According to E. Dieterich, the frequent failure of oleoresin of male fern as a remedy against tape worm is to be ascribed to its irrational administration. It has become known that the popular "worm doctors," who use almost exclusively the oleoresin of male fern, and who hardly ever meet with a failure, administer the remedy in conjunction with castor oil, instead of following it by the oil after one or two hours, as is usually done by practitioners. The object is to bring the extract, in an unaltered or undigested condition, in contact with the worm. The experiments which have been made by mixing one part of the oleoresin with two parts of castor oil have been very successful, and this mode of administration deserves, therefore, the preference. Oleoresin of male fern is apt to derange the stomach, and when enveloped partly in the oil is likely to pass it more rapidly, which constitutes another advantage. The mixture has, it is true, an unpleasant taste. This may, however, be disguised by filling it in capsules of about three grams (forty-five grains) each. The dose may be regulated from six capsules (equal to six grams or ninety grains of the oleoresin and twelve grams of castor oil) to seven or eight more, according to circumstances. It is advisable to empty the bowels on the preceding day by a mild purgative, best by castor oil.—*New Remedies.*

RECENT FRACTURE OF SKULL WITH DEPRESSION.

Dr. S. W. Gross (*Am. Practitioner*): In all recent fractures of the skull with depression, if the latter be moderate, whether simple or compound, the patient should be left alone. If, however, fixed and severe pain at the point of injury, febrile excitement, increase of local temperature and a commencing puffiness of the scalp, supervene within a few days after the accident—signs which are indicative of depression of the internal table and the development of pathymeningitis—elevation of the depression should be promptly effected. In all recent fractures, whether simple or compound, attended with symptoms of compression, the trephine should be resorted to, and the same rule should apply, whether symptoms be present or not, if the depression be considerable and funnel-shaped.

VENEREAL AND COMMON WARTS.

Unna (*Boston Medical and Surgical Journal*) recommends for the treatment of condylomata acuminata and ordinary warts the continuous application of unguent hydrarg. containing five per cent. of arsenic. In the case of a young girl upon whose hands were a hundred or more warts, the unbroken application for three weeks of a plaster containing each 0.2 square metre, 10.00 grammes of arsenic and five grammes of mercury, caused entire disappearance of the disease without any irritation of the normal skin. Cure was effected not by reason of necrosis and destruction of the warts, as after the use of caustics, but by resorption, as in cases of spontaneous cure.—*Chic. Med. Review*.

ERGOT IN SKIN DISEASES.

Dr. Heitzmann, of New York, had found this agent of service in skin diseases of a congestive character. In some cases of pruritus it had acted like a charm. In certain forms of acne, especially pustular acne of the beard, and in erythema, it is very useful. He use it both internally and locally (the former 3 ss doses fl. ext.)—*Maryland Med. Jour.*

HOT WATER IN THERAPEUTICS.

Several years ago I learned in my personal experience that no agent relieves nausea and vomiting so satisfactorily and promptly as water as hot as can be drunk. Since then, I have used it in a large number of cases, and it has been uniformly reliable. The following classification may be made of the cases in which it has been used:

- (1.) Cases in which nausea and vomiting occurred at the onset or during the course of acute febrile disease.
- (2.) Cases in which these symptoms were caused by overloading the stomach when its functions had been impaired by protracted disease.
- (3.) Cases in which they were produced by nauseous medicines (not emetics) at the time they were taken.
- (4.) Cases of acute gastritis caused by the ingestion of irritants.
- (5.) Cases in which these symptoms were purely reflex.
- (6.) Cases of chronic gastritis.
- (7.) Cases of colic in newly born infants.
- (8.) Cases of flatulent distention of the stomach.

Among the cases of Class 1 was a case of diphtheria and one of puerperal septicæmia, as well as one of tuberculosis, in which the stress of the disease fell upon the digestive apparatus. In each of these a half glass of hot water always gave prompt relief when every other remedy failed. The most impressive and permanent results of this remedy seem to be in cholera infantum—hot water being retained when everything else was rejected; and it would so compose the stomach that food could be given almost immediately afterward.

The nauseant medicines mentioned in Class 3 are often retained if given in hot water as a vehicle. When an enormous quantity of whisky has been drunk, and the stomach will not tolerate anything else, hot water will be retained, and then food can be given.

Hot water is less satisfactory in vomiting of pregnancy, yet it is of considerable value in many cases.

In the various manifestations of indigestion, classed 6, 7 and 8—hot water is almost invariably followed by good results. In dyspepsia it may be given before each meal, as well as at other times, to cause the discharge of any undue amount of gas in the stomach by eructation. In this way it affords relief to young infants suffering from colic, and it is rarely necessary to prescribe anything else. It has been used successfully in a case of severe palpitation of the heart from dyspepsia.

The *decongestive* and hæmostatic action of hot water have been variously accounted for by gynæcologists. Dr. Pitcher, of Detroit, thought that when applied to a bleeding vessel, the immediate effect is dilatation, which sufficiently slows the current to form a clot; and constriction occurring afterward, the clot is firmly held and the lumen of the vessel closed.

Dr. Emmet says that the direct result is relaxation of the coat and vascular turgescence; afterward, if continued, reaction follows and contraction occurs.

Carl Richter, of Berlin, thinks "the contact of the hot water with the partially denuded inner wall of the uterus causes a slight inflammatory irritation, an œdematous transudation, and a swelling of the tissues, principally the submucous, intermuscular, and perivascular connective tissue, by which the blood vessels become compressed and their lumina thereby occluded."

The action of hot water upon the uterine or gastric mucous membrane or upon abnormally full or bleeding vessels in any part of the body, may be readily and simply explained by a well-known physiological principle, viz.: That of watching a frog's foot while a needle is drawn across without injuring the membrane. The vessels will presently contract and close, and after remaining so for a few minutes, will dilate to respond no more, or only partially, to such stimulus. With a stronger stimulus, as that of gentle heat, they will again contract, and such contraction may be lost a day or two.

Wharton Jones found that cold causes speedy constriction, quickly followed by dilatation.

Beaumont, in his observations on St. Martin, found that the ingestion of cold water was followed by blanching of the gastric mucous membrane, quickly followed by more than normal redness. Now, from whatever cause nausea and vomiting may arise—from the direct contact of an irritant, or the effect of an emetic, or from reflex nervous influences, it is certain in many instances, and probable in all others, that the vaso-motor centers controlling the gastric blood supply are also influenced and gastric hyperæmia produced; and this condition being the link in the casual chain which is broken by the contact of the hot water on the gastric lining, the effect fails to follow. In flatulent distention of the stomach the muscular coat, impeded by the gaseous pressure, is excited to extraordinary work, and the gas is expelled. Patients who begin taking hot water to allay nausea, can not only take large quantities without inconvenience, but get to liking it; and at times, when little or no water can be taken, by drinking it hot, enough can be retained to fully meet the requirements of the organism. This fact has an important bearing in therapeutics. Often in both acute and chronic diseases, the issue depends solely on the amount of work that the kidneys will do. In many diseases, the structure of these organs, though not primarily affected by the morbid process, is liable to damage secondarily. The injury may be due rather to the concentration of the urine—the small amount of water—than to the absolute amount of solids; so that the kidneys become clogged with destructive, effete matter if sufficient water fails to flow through them. But dilution of the urine is not the only good resulting from the free drinking of water. The skin is put to work and carries off a large portion of the effete matter that would otherwise have to pass through the kidneys.—*Dr. Douglas Morton, in Louisville Medical News.*

THE MANAGEMENT OF STRABISMUS CONVERGENS.*

BY B. ST. JOHN ROOSA, M. D., LL. D.

The management of strabismus convergens was formerly supposed to be a very simple affair. When Donders showed its relations to a short antero-posterior diameter of the eyeball, a new importance was attached to it. It was found that mere division of the *rectus internus* was not always sufficient to cure the squint. The ciliary muscles and the internal recti act together. If you paralyze the ciliary muscle by the use of atropia, you at the same time lessen the power of the internal rectus. In the use of this drug, therefore, a means of dispensing with the operation was found by some authorities. But full trial has proved that these hopes of cure without cutting are usually illusory, and the division of the muscle has as firm a hold upon the profession as ever. But the use of atropia *after* the operation, the use of glasses *after* the operation are often—yes, generally necessary, to effect a cure.

In the forty cases that have been operated upon in this division of the hospital since November 1st, atropia and glasses have been required in nearly every case. Any one may soon acquire the mechanical skill to take up the internal rectus on a hook and to divide it close to its insertion with the scissors; but to learn what is known about strabismus convergens, and to appreciate the gaps in our knowledge, will require some months of careful study and close observation. It is not the simple subject that Diffenbach thought it. Perhaps I may say, it is not yet as clearly understood as even Donders supposed his observations had made it. If hypermetropia be the chief cause of convergent squint, why do so small a proportion of hypermetropics squint? A large percentage of the people of the world who are not *myopic* are *hypermetropic*. Yet very few of the latter squint. Why is one operation sufficient to cure some cases of marked strabismus, while two or three, or even four, are sometimes

* Clinical remarks before the class of the New York Post Graduate Medical School.

needed for some, in which the deformity is slight? I am not able to tell beforehand in which cases I shall be obliged to operate twice or three times. I always tell the friends of the patient beforehand, that to get a good result they must leave the case to my observation for at least six weeks.

You have observed that although I make a free incision into the conjunctiva and into Tenor's capsule, that I never use a suture after the operation. I do not *usually* find any difficulty afterward in the way of a cicatrix or granulation. It is easier to snip off a granulation if it came, than to take out a suture. The child generally regards the cutting a suture as another operation, and dreads it accordingly. We have had but one case of inflammation of the edges of the wound this winter. In all the cases, except those just performed, I finally "straightened the eyes." In a few months after the operation, I usually advise that the use of glasses, as for young hypermetropics in general, be given up, except for close work. Their use is, however, essential in the first few weeks after the operation is performed. I know of no subject in ophthalmology that will better repay study, and in which there is a better prospect of new contributions to our knowledge, than this of the management of strabismus convergens.—*The Planet*.

THE NEW MEDICAL CODE.

There is no denying the fact that the controversy in the State of New York over the new medical code is becoming acrimonious and bitter. This is greatly to be regretted, for it makes any compromise difficult, and tends to prevent the peaceable acceptance of the result by the minority, should the question at any time be definitely decided. An appeal to the prejudices of some men is far more productive of results than an address to their reason, hence the danger that the question will not be dispassionately settled, and that extreme partizans will take advantage of this fact to remain recalcitrant. All classes of medical men will readily declare themselves in favor of true progress,

but will honestly differ in their estimate of so decided a step as that proposed by the advocates of the new code. Upon its face, the question of permitting a regular practitioner to give his advice in a critical case to any patient who may desire it, does not seem very alarming. But if this carries with it an acknowledgment of all the various isms and pathies by which medicine is vexed, it is well to think twice about it. If medical science be a science at all, there can be but one school, and the practitioners of that school are not only at liberty to use, but are in duty bound to employ every remedy which proves efficacious in the control of disease. It matters not whence the drug is derived, it belongs to every medical man. That physician who refuses to employ a remedy because it was first brought into favor by some irregular practitioner, is recreant to his duty. The virtues of cold water were known to medicine long before Hydropaths endeavored to found a school upon its exclusive use. It ought not to be a crime for an educated physician, when a human life is at stake, to point out to a specialist, in the consultation room, that a good thing may be abused. But the acknowledging of a cold water fanatic as a medical man is quite another matter. Whatever is done should be by the profession as a whole, and the disrupting of fraternal professional relations is a thing to be deplored. Therefore, the proposal to refer the whole matter to the American Medical Association, provided there can be a full and fair expression of professional preference, would seem to be the easiest method of settling the question. Meantime the Homœopaths, the most numerous of all the outside medical sects, are standing by, amused spectators of the struggle.—*Independent Practitioner*.

REDUCTION OF DISLOCATED FEMUR.

Dr. Samuel Logan, of New Orleans (*Gaillard's Med. Jour.*) re-asserts the plan proposed by him some years ago to reduce, by manipulation, luxations of the femur. He was induced to do this by the recital of the difficulties incurred and the means

taken to overcome them in a case by Dr. C. Johnston, of Baltimore. This difficulty, mentioned by Mr. Callender, consists in the slipping of the head of the femur around the rim of the acetabulum during the process of the ordinary manipulative means for reduction, thus lodging the head of the femur either into the thyroid or sciatic-foramen, instead of into the acetabulum. This danger may be obviated, according to Dr. Logan, by making use of the anterior border of the pelvis as a fulcrum by which the head of the femur may be lifted over the rim of the acetabulum. When the thigh is fully flexed upon the abdomen, the limb, at the junction of its middle and upper third, impinges upon that portion of the pelvis just below the anterior superior spine of the ilium. Forced flexion now lifts the head of the femur, and rotation, outward for any form of posterior, and inward for any form of anterior dislocation, will throw the bone into place. An analagous idea has occurred to Dr. George Sutton, of Indiana, who suggested an artificial fulcrum of the arm of an assistant, or a roll of cloth placed in the groin. Both plans resemble the ancient method of placing a pillow between the thighs as a fulcrum for a similar purpose.

WHITE LEAD PAINT IN ERYSIPELAS.

Mr. Barwell, of Charing Cross Hospital, in the *Lancet*, March 10th, gives a report of three cases of erysipelas, in which he obtained unusually good results by the application of the old-fashioned remedy, white lead paint. No medicine used, excepting, in some cases, the previous administration of a purge. He applies the paint (made by rubbing up the carbonate of lead with linseed oil, and mixed with turpentine as a dryer) over inflamed skin, and a little beyond it, says that in all cases the pain ceased almost immediately after the application; temperature became normal and a rapid cure resulted. The paint is left on until it gradually comes off with slight desquamation of epidermis. The remedy probably acts by occlusion of air. It may be obtained in any paint shop.—*Cin. Med. News.*

SURGICAL EXPEDIENTS IN EMERGENCIES.

At the recent meeting of the State Medical Society of Pennsylvania, held May 10, 1883, Dr. R. J. Levis (Class of 1848), gave an account of some surgical expedients, in which the skill and readiness of the surgeon are often severely tested. Some of these suggestions, which we find reported in the *Medical News*, were quite ingenious.

In case of an over-distended bladder, where prompt relief is necessary and no catheter is at hand, he had taken a piece of bell-wire, doubled upon itself so as to form a loop, which was readily passed along the urethral canal into the bladder. In a female a rye-straw might be used, its end being rounded with a little sealing-wax, or the stem of a clay-pipe, as crude substitutes for a catheter. In phlebotomy, when a proper lancet is not at hand, an ordinary pocket knife will answer, provided the vein be held in position by transfixing it with a needle after applying the ordinary bandage.

For obstinate epistaxis requiring plugging of the nostril, a piece of sponge, to which a string is fastened, is forced through the meatus to the posterior nares; small pieces of sponge are then to be threaded on this cord and pushed in succession into the passage until it is filled; when the danger of hemorrhage is over, they can be removed by reversing this process. Another good method in an emergency is to take a portion of the intestine of a chicken or other small animal, close one end and pass it through the meatus; water or air may now be forced into the portion in the nostril so as to make equable compression. If it is necessary to plug the posterior nares, a slender gum bougie or a piece of thick catgut ligature may be passed along the floor of the nostril and brought out under the soft palate; a string can then be attached and brought out of the nose in front by withdrawing the bougie; the sponge can then be employed in the usual manner.

In case of bleeding from an intercostal artery from a homicidal wound, he had succeeded in arresting the hemorrhage by introducing the upper part of an ordinary key into the pleural

cavity, then turning it at a right angle, and making pressure upon the vessel. After this had been continued for some hours the bleeding ceased.

A very efficient substitute for the Esmarch elastic bandage is a flannel roller cut bias. For dislodging and forcing downward a foreign body in the œsophagus, an ordinary carriage or riding whip, knotted sufficiently far from the end to ensure flexibility, may be used.

Good temporary dressings for fractures may be extemporized by tearing palm-leaf fans into strips; a more permanent fixed dressing can be made by dipping ordinary sand-paper in hot water, and applying it while soft; it adapts itself to the shape of the limb, but becomes sufficiently strong and rigid afterwards. hard dressings can also be made with starch, or eggs and flour.

In moving a patient with fractured thigh, the sound limb may be made into a splint, by fastening the legs together. In treating fractures of the femur, complicated apparatus is not necessary; simple extension by weights is all sufficient, the limb being kept in position by lateral supports or sand-bags. The postural method without splints is to be preferred in all fractures near to joints; fracture of clavicle is best treated by the supine position, with the head slightly elevated.

An ordinary gimlet is an efficient instrument with which to open the mastoid cells in case of abscess and threatening cerebral complication. The carpenter's rasp may sometimes replace the trephine in replacing fragments of bone after fracture of the skull.

A rubber tube may be used instead of a syringe in cases of obstruction of the bowels, the fluid being injected by hydrostatic pressure.

The substitution for belladonna of stramonium, where a mydriatic is needed, and replacing carbolic acid by sulphurous acid, as a disinfectant; and the employment of hot water in place of all other styptics, were also mentioned. Dr. Levis prefers the straight glover's needle in place of the ordinary curved surgical needle for sutures.

Editorial.

BACILLUS TUBERCULOSIS.

For a very small subject, the bacillus has come to occupy a very large space in medical literature. We already have published several original papers which have generally supported the theories so ably advanced by Koch. The present number contains an excellent article, entitled "Contagium Animatum," to which we would direct the attention of our readers. There has been, however, no lack of able controversionalists, who have undertaken the refutation of the etiological relation of the bacillus with tuberculosis. In England (a country always conservative in medical as in other affairs), the majority of the profession have denied the parasitic origin of phthisis, and one of the physicians in the "Brompton hospital for consumptives," affirms, that after seventeen years' experience, he had never seen a case of infection, directly or indirectly. The "bacillians," however, have scored a point, by the report to the "Association for the advancement of medicine by research," on the relation of micro-organisms to tuberculosis. It is made by Dr. Watson Cheyne, whose name in England carries much weight, as he is well known as an earnest, thorough and conscientious observer and student. The April number of the *London Practitioner*, devoted its entire eighty pages to the report, which is well worthy of a careful perusal, though too long for republication in our pages. We hope, in a subsequent number, to reproduce portions of it. The "vital points" in it may be summed up as follows:

That tuberculous processes in the lungs are due to the tubercle bacilli, and to them only.

That the bacilli are present in the intestinal ulceration, which often occur in phthisis, and which are supposed to be due to swallowing sputum.

That milk of tuberculous cows may be infectious.

That the absolute diagnostic mark of a tuberculous process is the presence of the bacilli.

The heredity of tubercles is denied.

He gives the following as the sequence of events in phthisis: The bacilli which reach the lungs by inhalation, develop in the epithelial cells lining an alveolus; this alveolus becomes filled with cells; neighboring alveoli become infected, and the same process goes on in them. The further result will depend on the number and growth of the bacilli, and whether the patient is a good soil for their development. If they develop well, we have caseous pneumonia; if they grow slowly and with difficulty, we have fibroid phthisis. In the former case, the alveoli become distended early with epithelioid cells; this leads to inflammation of the walls of the alveoli; the cells soon undergo cheesy degeneration, and the presence of the masses lead to atrophy or sloughing of the alveoli. Infection of the neighboring parts of the lung occurs, both by continuity, and also by partial coughing up and re-inhalation of the bacilli into other parts of the lung. In the case of fibroid phthisis, the bacilli are few and grow only with difficulty. Thus fibrous formation occurs extensively. In parts, the process may be more rapid, and there cheesy masses are formed, which may lead to breaking down of the lung and the formation of cavities. Dr. Cheyne affirms also that the bacilli may be found in the sputum before any diagnosis can be made out by physical signs, and refers to the methods devised by Koch, Ehrlich, Baumgarten, and others, for demonstrating their presence, most of which have already appeared in this journal.

EDITORIAL NOTES.

DR. J. D. HILL and family sailed for Europe last month, intending to remain abroad a year.

ANOTHER of the editors of the JOURNAL, Dr. P. W. Van Peyma, sailed for Europe last week, intending to spend some months in

study and recreation in Germany and Northern Europe. We are promised an occasional contribution from him, and we therefore hope that the series of letters which Dr. Davidson has supplied will not terminate with his return, but will be continued and supplemented by Dr. Van Peyma.

DR. LOTHROP'S accident and the absence of Drs. Davidson and Van Peyma left the JOURNAL without an editor. We would express our thanks to Drs. Howe, Peterson, Tremaine, and others who volunteered their kind assistance in the issue of the JOURNAL for this month. The happy return of Dr. Davidson from Europe last week, however, made it unnecessary to accept their kind services, the offer of which is, however, not the less appreciated.

DR. THOMAS LOTHROP met with a severe accident three weeks ago, which has entirely incapacitated him for business. In making his professional rounds, while driving on Delaware avenue the front axle of his buggy suddenly broke and the Doctor was thrown to the pavement, receiving severe contusions on his head and face, and was picked up insensible. Under the skillful treatment of Dr. Tremaine he has rapidly improved, and we hope will soon be at work again. It is to Dr. Lothrop's literary ability and large medical experience that the JOURNAL owes its continued improvement and growing favor, and our readers will rejoice with us that our able confrere escaped any more serious injury.

OBITUARY.

At a special meeting of the medical staff of the Buffalo General Hospital, convened May 23, 1883, on account of the death of Dr. John Gray, of Avon, Livingston county, N. Y., the following minute was directed to be spread upon the records:

"Dr. John Gray, senior assistant resident physician of the Buffalo General Hospital, died May 21, 1883, of scarlet fever of diptheretic character, after an illness of four days, contracted from a patient in the hospital, in the discharge of his duty.

"Dr. Gray was but twenty-three years of age, graduated in medicine at the medical department of the University of Buffalo

in February, 1883, received the appointment of senior assistant resident physician, on competitive examination, and entered upon the discharge of his duties March 1, 1883.

"Short as was his residence in the hospital, he fulfilled the promise of his collegiate career. He was studious, diligent, attentive, intelligent, kind and courteous. There was in him the material for making a great and good physician, and so he would have builded himself. The hospital has sustained a great loss, the medical profession a greater, and his family a bereavement which may be imagined but cannot be expressed. To them the medical staff of the Buffalo General Hospital extend their most profound condolence and sympathy."

It was moved, seconded and carried that a copy of the above minute be published in the BUFFALO MEDICAL JOURNAL, and also that one be sent to the father of the deceased.

Respectfully yours,

C. DIEHL,

Secretary Staff Buffalo General Hospital.

BUFFALO, May 27, 1883.

Reviews.

A Practical Treatise on Diseases of the Skin, for the use of Students and Practitioners. By JAMES NEVINS HYDE, A. M., M. D., Professor of Skin and Venereal Diseases, Rush Medical College, Chicago, etc. Philadelphia: H. C. Lea's Son & Co. 1883.

There is, perhaps, no department of medicine which has, in this country, made greater advances than that of dermatology. Its didactic and clinical teaching has become a regular feature in all our leading colleges, and during the last decade many admirable text-books, colored plates and photographic portraits, have appeared from American authors. In view of this, it might

reasonably be asked: What need of more books on this subject? After a careful review of Dr. Hyde's book, we must admit he has earned the right for its existence. Within a limit of 600 pages he has given a concise but really valuable treatise on cutaneous diseases, presenting, in a comprehensive form, the results of the latest observation and experience. The book is particularly adapted to the wants of the general practitioner, and we have no doubt will be as successful as its genuine merit deserves.

The Dispensatory of the United States of America. By Dr. GEORGE B. WOOD and Dr. FRANKLIN BACHE. Fifteenth edition; rearranged, thoroughly revised and largely rewritten, with illustrations. By H. C. WOOD, M. D., Professor of Materia Medica and Therapeutics, and of Diseases of the Nervous System, in the University of Pennsylvania; JOSEPH P. REMTON, Ph. D., Professor of Theory and Practice of Pharmacy in the Philadelphia College of Pharmacy; and SAMUEL P. SADTLER, Ph. D., F. C. S., Professor of Chemistry in the Philadelphia College of Pharmacy. Philadelphia. J. P. Lippincott & Co. 1883. Price \$3.00.

It is just fifty years ago that Dr. George B. Wood gave to the American profession the first edition of the U. S. Dispensatory, and from that day to this the respective editions have been universally accepted as the standard commentary on the official Pharmacopœia, and it has been so employed, not only in this country but in every land where the English language is spoken. Such a success is, we believe, unrivaled in medical literature, and is to be accounted for only by the thoroughness, accuracy and completeness which has characterized the work, and to the energy and zeal of its editors, who have never allowed the work to fall behind the progress of the age. The present edition is the fifteenth, and the highest praise we can give it is to say that in value it surpasses its predecessors. The advance in the last decade in medical, pharmaceutical and chemical knowledge has necessitated many changes and additions, and these have been made with so free a hand that the present volume may be con-

sidered a new book, founded upon the old U. S. Dispensatory. We have read but a few of its 2,000 pages, but those articles which we have had time to peruse have shown us that the very latest achievements in pharmacology are recorded in this volume. A novel feature in this edition is the indication of the pronunciation of the officinal titles by diacritical marks. This addition will, we hope, lessen the cacœpy so painfully common, not only among the druggists but also with medical men, who have less excuse for mispronunciation. There has been added, also, a very complete list of analyses of American mineral spring waters, and some of European note. The illustrations are new and original; and in every way the book is worthy of the universal commendation with which this edition has been received.

Aids to Medicine, Part No. 1. The General Diseases: Diseases of the Lungs, Heart, Blood Vessels and Liver. By C. E. ARMAND SEMPLE, B. A., M. D., etc. New York: G. P. Putnam's Sons, 27 West Twenty-third street.

This is a little book which may prove useful as an introduction to the study of medicine, or as a refresher to the memory for those going up for examination. It is one of the "Students' Aid Series," and is handsomely printed in 16mo. form, convenient for the pocket. Price 35c.

The Practitioner's Ready Reference Book, a handy guide in office and bed-side practice. By RICHARD J. DUNGLISON, A. M., M. D., Editor of "Dunglison's Medical Dictionary," etc. Third edition, thoroughly revised and enlarged. Philadelphia: P. Blakiston, Son & Co. 1883.

It is less than three years ago that the second edition of this book was received. The issue of a third edition in so short a time proves that the work is fully appreciated by the profession. To those who have not read it we will say that it is a work of ready reference, containing, in a compact and tangible shape, a

vast amount of practical information. This new edition is in many ways a great improvement upon the last, and those who are wise enough to add it to their libraries, will find the consultation of its pages almost an every day occurrence.

Handbook of the Diagnosis of Treatment of Diseases of the Throat, Nose and Naso-pharynx. By CARL SEILER, M. D., Lecturer on Laryngoscopy at the University of Pennsylvania, Chief of the Throat Dispensary at the University Hospital, etc. Second edition, thoroughly revised and greatly enlarged, with seventy-seven illustrations. Philadelphia: H. C. Lea's Son & Co. 1883.

Dr. Seiler is one of the teachers in the post graduate course in the University of Pennsylvania, and the writer can testify, by personal knowledge, of his rare ability as a clinical instructor. This book demonstrates, that as an author, he possesses the same faculty of teaching, and the student of laryngoscopy will find this work an invaluable guide in acquiring the skill requisite to the successful diagnosis and treatment of diseases of the larynx and naso-pharynx. The value of the book is increased by the admirable wood-cuts with which it is illustrated.

Scrofula and its Gland Diseases An introduction to the general pathology of Scrofula, with an account of the histology, diagnosis and treatment of its glandular affections. By FREDERICK TREVES, F. R. C. S., England, Assistant Surgeon at the London Hospital. Philadelphia: H. C. Lea's Son & Co. 1883. Price 10c.

This is another of that remarkable series of medical books published by Lea and others at the ridiculously low price of ten cents. Nearly all of the volumes published, so far, have been of sterling merit. The one before us is of great value to every practitioner, as the most recent facts in connection with this widespread disease are well brought out, and a careful and wise consideration is given of the recent theories that have been expressed as to its nature and relationships.

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Original Communications.

APHASIA.*

BY H. R. HOPKINS, M. D.

Mr. President and Fellows :

As an introduction to my remarks upon aphasia, I would invite your attention to the following case :

Mrs. C. C. F., of about 67 years of age, had been reared in an atmosphere of ease, wealth, and the most remarkable devotion ; had been twice married, and worshipped by both her husbands, the latter having been the President of our nation. I had known of her health for years before she came under my personal observation, and knew that she had the usual trivial but absorbing ills of the idle and the wealthy. I was also not unfamiliar with the gossip of her neighbors, and had frequently heard it remarked that she was a woman of the most decided intemperance in the use of stimulants and narcotics, and of the most ungovernable temper.

During my service as her medical adviser, I was perfectly satisfied that there was not a word of truth in the rumor concerning her intemperance, but all sufficient grounds for the

* Read before the Buffalo Medical Club.

belief regarding the instability of her moods. I refer to this partly for the chance of bearing testimony to her good character, which was sadly slandered by rumor, and partly to emphasize the importance of certain mental states as signs of cerebral conditions antecedent to cerebral hemorrhage. Authorities upon lesions of the brain frequently mention uncertainty of gait, irritability of temper, and instability of purpose, as among the premonitory signs of cerebral hemorrhage, and each of these was well marked in my patient.

To this day half of her friends, from her uncertain gait upon the street and her peculiarities of moods, her difficulties with servants, believe the latter years of her life to have been clouded with the habit of daily intoxication, while I know perfectly well that during these years she was an almost total abstainer.

After having been under my care for rather more than a year, and after being confined to her bed and her chair with a sprained ankle for several weeks, she was found one morning with marked right hemiplegia and unconsciousness.

During the forenoon the mind cleared to the extent of her making signs with the left hand and attempts at speech.

This improvement was continuous, and in the course of a week the mind was perfectly clear, the hemiplegia was complete, but she could only say "yes" and "no," and that not always at the right time, apparently only said the words automatically, and did not know which word she had used. In a short time the word "no" was lost, and "yes" was her entire vocabulary.

During the early weeks of her sickness she was much tormented with something she wished to communicate, and her fruitless attempts were simply agonizing, and I now recall them as the severest ordeals of my professional experience.

During this time, and in fact during her whole remaining life, the language of gesture was never for a moment at fault. The left hand, the head, the muscles of the face, and the tone of the voice never for a moment failed to express her thoughts, and as she grew better her nurses, attendants and myself often

remarked that words were not of much importance, that there was a great deal of language without talking.

From the first recovery of consciousness, a few hours after the attack, we saw that she understood everything said in her presence, and this ability remained up to the time of the subsequent and fatal seizure, nearly a year from the date of her first attack. During this time certain observations were made upon the state of her faculties, of considerable scientific interest.

As I said, for weeks during the earlier part of the illness, she was almost wild with the desire to make some communication to us, and particularly to me, and in my attempts to find what she wanted to say, to assist her in making her wants known, I demonstrated that she had not the slightest memory of the form, construction or use of words. She could not find on a card, with the letters of the alphabet printed plainly, the letters to spell the words "yes" or "no," or, in fact, any word of the language. More than this, I could not teach her the simplest word, although she tried again and again, with all the earnestness of desperation, to see and follow the steps by which the word was composed. I remember at the time that it was like telling one, in absolute darkness, to see. The mind could not take the first step in the desired direction. During this whole time there was not the first sign of mental impairment in any other direction. Papers, magazines and books were daily read to her, and we talked over all the topics of the day, whether they were local, national or even of a wider interest. Her memory was never for a moment at fault, and she continued to be the imperious mistress of her house, as she had ever been.

The aphasia came early in the month of October of the year of our presidential election, and we soon learned that the illustrated papers were as plain and intelligible to her as to any one; she saw them regularly, and at once recognized the prominent political characters as they, from time to time, appeared, and

was plainly perfectly appreciative of the situations in which they were intended to be placed.

The case terminated in the month of August of the next season, and was accompanied with complete paralysis of the left side, the right being previously paralyzed, which was succeeded by loss of consciousness on the third day and death on the fifth.

Aside from the interest this case had from the clinical point of view, there was to me a question of considerable interest in the situation of one in full mental health, cut off from communicating with one's friends, by the means of spoken or written words, and the thought would come to me, again and again, that our science should have a remedy for the painful situation. The language of signs should be so developed as to be available in such cases. Before my patient's death we had constructed quite an extensive vocabulary of signs, and thereby made communication quite easy and reliable.

Aphasia is usually treated as a disorder of speech, but would be more properly regarded as a disorder of memory, and the chief interest to the profession arises from the light which its study has thrown upon that faculty of the mind, and I would, for a few moments, direct your attention to the present views of that faculty. In the use of the term "memory a faculty of the mind," I am simply following the custom of early days, and I bring the term to your attention for the purpose of pointing out a certain chance in the term for a misconception. Following the thought of memory as a faculty of the mind; students were wont to give that faculty a personality, an entity, and also to locate the same in some definite part of the brain as its seat; to consider the faculty as something complete, concrete. This tendency is illustrated by the custom of saying that a person had a good or a poor memory, or that such a one had lost or regained his memory. This was the habit of our early teachers; whereas, we are now taught that memory is a term applied to the action of nerve tissues; that the phenomena of memory is one of the most distinctive exhibitions of nerve action; that

memory is a mode of nerve action, and that it consists in the property of nerve tissues of receiving impressions, of storing those impressions, as it were of registering impressions and of reproducing those impressions. I think that you will at once see that this is quite an expansion of our thought.

Instead of memory being a faculty of the mind by which we remember the doses of certain drugs, the signs of certain diseases, the directions and restrictions of our code of ethics, it becomes a property of our organization by which we recognize the difference between ourselves and that which is not ourselves; that instead of memory being concrete and simple, it is complex and multiple; that instead of one having a memory, he has as many memories as he has senses; that we have a visual memory, an acoustic memory, a gustatory memory, an olfactory memory, a tactile memory; and that each of these is but a family comprising many individuals.

I can not detain you with even the bare enumeration of the distinct memories, whose accumulations we are using at each hour of our lives, but I will say, that it is the teaching of the literature of the day that each of these memories has a definite seat in the brain; that the acquirements or residua of each has a mechanical, a chemical, a nutritional exponent or counterpart in the brain; that each memory has its cerebral organ; that the normal performance of the function of each depends upon normal cerebral nutrition, and that from abnormal circulation and consequent deranged nutrition, the function of each memory may be perverted or arrested.

Clinical medicine gives abundant testimony to show the localization, the individuality and the independence of the cerebral organs of the various memories, and furnishes numerous instances of the loss of one or more of these organs, while the others remain in regular and normal action.

In fact, this advance in cerebral physiology has been made by using the materials furnished by the clinical physician and the

pathologist, and of these materials the phenomena of aphasia have been among the most interesting and the most important.

This reminds me that this is supposed to be a paper upon aphasia, and that being the case, you will naturally expect me to say something upon that subject, and as I have carefully avoided the topic up to this time, we will at least remark in passing that aphasia is not a disease, but a symptom, and that essentially it shows itself as an impairment or a loss of the power to express one's thoughts by use of the faculty of speech.

Clinically the symptoms vary in the most marked degree. Aphasia may exist as a slight loss of readiness of speech, a liability to forget a frequently used word, as one's own name, or the name of an intimate friend, or may be so extensive as to forbid the use of any words, or even signs or gestures, at the same time thought is normally present. Then again, one can speak but cannot write, or can write but cannot speak. Cases are also reported where the reception of words was similarly interfered with. One could not understand spoken words, but could written ones, and *vice versa*.

Ataxic aphasia, amnesic paraphasia, agrammatism, agraphia, word-deafness, word-blindness, are terms used to denote the particular memory whose impairment or loss constitutes the degrees or varieties of aphasia, or, as we should say, disease.

You will also expect me to refer to the theory that the seat of the lesion resulting in aphasia is in the region of the third convolution of the frontal lobe, or in the island of Reil or its neighborhood, and also to the coincidence of aphasia and right-sided hemiplegia, as well as the fact that left-handed people get the disease with left-sided paralysis.

These facts have been frequently observed, and freely commented upon, and will doubtless receive, in your discussion, such attention as their interest and importance demand. My purpose will be served if in this connection you keep before your minds the facts concerning the nature of memory which the study of aphasia has helped to establish:

1. That memory is a faculty common to all sentient beings.
2. That it is by the possession of this faculty that such beings conserve and reproduce the impressions caused by the forces of the external world.
3. That the operation of each one of our senses is through the medium of several distinct and independent memories.
4. That each of these different memories has its seat in a definite portion of the brain.
5. In fact, that every remembered thing, fact or impression, has its seat and counterpart in the brain, just as the photographer preserves the negatives of the pictures he has taken.
6. That from disease these registrations may be permanently or temporarily destroyed, and the individual thus lose single facts or whole groups or classes of such facts.
7. That the memory of a single idea, that is, of the thought which is in the mind before the spoken word is, and to express which the spoken word is used, and the memory of the motor combination by which we speak the word, and also the memory of the motor combination by which we write the word, as well as the memory of the acoustic combination by which we understand this word when spoken to us, and the visual memory by which we correctly interpret the same when we see it written or printed; that each of these memories of a given idea occupy separate locations in the brain, and that some may be lost without the impairment of the others.

Let us return to the case of Mrs. F. and see what was the condition as to the loss or the preservation of her memories.

In so far as we could ascertain, the world at large was the same to her after the attack as before. Horses were horses, dogs were dogs, friends were friends; everything in her house was recognized at sight, and she had forgotten nothing that she had ever seen, or heard, touched, smelled or tasted. She knew everything, where everything was, and what everything was for, but knew the name of nothing. The memories by which the

various senses brought her in contact with her environment were preserved intact, but the motor combinations or memories by which these various impressions were represented in characters of vocal speech, or the characters of written speech, were utterly destroyed.

For instance, in a given case, for example, the substance water. She retained her memory of its appearance and sight, and also its touch and its taste. She knew its uses to bathe in and to drink of when thirsty. She also recognized its name when we used the word, as in asking if she would have a glass of water. But how to go to work to produce a sound which should be that which we hear in the word "water," she had no more idea of than one has of vision without light. Language made the same impression upon her that it ever had, but she had no memory of the use of words as the signs of ideas.

This was not from lack of ability to vocalize, for she was habitually engaged in this exercise, and would express a wide range of feeling and thought by vocal sounds, but always without even an attempt at the formation of words. This state seemed to be one of permanence; there was no improvement from the beginning of the attack until the end. In the use of gesture there was never any uncertainty or confusion, and as time passed the nurse had no difficulty in reading her signs, and she ordered her meals, her horses; she inquired after her friends, and sent messages to them with as much directness as if in full possession of the faculty of speech.

The interest in this case and subject seems to be from the light thrown upon the processes of the mind, and the result is to indicate that in regard to memory, the apparently simple is quite complex and multiform; that memory is primarily a biological fact, and may exist with or without consciousness, and that its consideration is entirely within the domain of cerebral physiology.

PARESIS, OR GENERAL PARALYSIS OF THE INSANE.*

BY WM. D. GRANGER, M. D.,

First Assistant Physician, State Asylum for the Insane, Buffalo, N. Y.

We shall, in this paper, dwell mostly upon the practical aspects of paresis, and consider the natural and clinical history of the disease, and the diagnostic symptoms, especially the earlier stages, when the patient is most apt to come under the observation of the general practitioner.

The disease has been recognized and described within the limits of this century. The first cases in this country were reported in 1849. Is paresis, therefore, to be considered one of the "new and rare" diseases that would come within the limits of Sir James Paget's definition, as made in his recent Bradshawe lecture, namely, that there are facts enough "not, indeed, to prove, but to justify the belief that we have here an example of disease which has appeared in this country for the first time within the limits of the last century, and which has since become sufficiently frequent and acquired sufficient and distinctive characters to be described by a general term and be called by a new name."

This is an interesting question, but cannot be fully discussed to-night. The disease is, however, one of localities, and is almost wanting in some countrys, or even parts of the same country. In America it occurs more frequently in the Northern and Eastern States. At the Utica asylum, up to 1881 there had been 439 cases of paresis admitted. In that year one in nine of the men admitted was a paretic. At the Buffalo asylum, of 492 admissions, thirty had paresis, while last year one in eight of the men had that form of disease. In the Louisiana State asylum there was no case of paresis among the 127 patients in their last report; while at the Wisconsin State asylum, out of 683 patients, but four had the disease. Why this difference it is difficult, nay impossible, with our pres-

* Read before Buffalo Medical and Surgical Association, Feb. 6th, 1883.

ent knowledge, to tell. There is much to cause us to believe that it is a new disease, and that it appears in different localities, where its progress may be formulated by the following law: The appearance of the disease among males, its increase among males, its appearance among females, and its increase slowly among them, then a stationary condition, when the disease seems to bear a constant proportion to the total cases admitted to an asylum.

There is much to interest and instruct in studying the etiology of paresis. The disease is found largely, but not exclusively, among men of middle life, strong, active and robust, among those of good circumstances and surroundings, rather than the ignorant, the poor or the laborer. But if the disease exists largely among this class, it is also true that those who have the disease are very frequently given to excess in the use of liquor, or they have suffered from syphilis, or they are known to have indulged in venereal excess. Often all these conditions have existed together and formed a part of the life of the paretic. For a fast young man to have paresis is a common matter, but for a virtuous young woman to have it is extremely rare, if it ever occurs. Of six women admitted to the Buffalo asylum, with paresis, one was married, two had been married twice, one being an actress and had led a wandering life, and three were prostitutes. I would express no stronger opinion than this, that paretics are largely found among the class described, and that syphilis and the other conditions mentioned are very frequently a part of the history of those having the disease. Cases not infrequently occur where none of these conditions are present.

In approaching the study of the clinical history of paresis, it is to be observed that in every case certain conditions are present, namely, there must be paralysis, there must be insanity, and the final result must be death. But remember the condition is not simply insanity plus paralysis, but that the form of both the insanity and paralysis is peculiar to this disease, and that they

are associated together in a manner unlike any other manifestations of these conditions.

An effort to define paresis is rather an unsatisfactory task, but it will aid in further discussing the subject to attempt it at this place. It is a disease characterized by an association of mental and physical symptoms, of which progression is the prominent quality. Physical symptoms are marked by progressive, incomplete paralysis of the muscles, especially those of speech and locomotion. The mental symptoms show a tendency towards dementia, and generally there are extravagant delusions, progressive, also, in grandeur and variety. This definition is a combination of several of the best that have been given. I would add, that in my opinion no definition is complete without saying that it is further characterized by so-called "paretic seizures," progressive, also, in their severity, and which partake of the nature of apoplectic, paralytic or epileptic attacks.

Paresis is divided into stages, but as it is a progressive disease, these are not always well marked. For our purpose it is best to consider three stages, which will cover the history of the full development of the disease, and make the so-called prodromic period a part of the first stage. The prodromic symptoms often continue a somewhat prolonged time before the full onset of the disease. They are not, as a rule, recognized by the friends, and if recalled at all, it is after memory is quickened by the questions of the physician. Among the earlier symptoms is perversion of the moral sense. If the patient is a moral man, violations of decency, debauchery, or even open immorality may occur, or if he is a man of loose habits, he becomes even more sensual. Petty thefts occur, not infrequently, early in the disease. A case came under the observation of the writer, of a clerk who stole the dinner pails of working men connected with the establishment. Great irritability, sudden passion, violent, threatening and even profane language in those who never gave way to anger, or increased want of self-control in those naturally lacking in those qualities characterize this stage.

There is early noticed, or rather, remembered, increased activity but want of steadiness of purpose; expansion of ideas and a tendency to speculation, change of manner and perhaps loudness of dress, boastfulness and failure of judgment. All of this sums of briefly a change of character, which gradually gives anxiety to friends, but does not make them consider disease of the brain as a cause for this change, and therefore they do not consult a physician. Sometimes there is depression, gloomy fears, failure of memory, and perhaps seclusive habits, and sometimes the patient early consults a physician. Physical symptoms frequently appear at this time. There is sleeplessness and severe headache, perhaps some neuralgic pains. There may be flushing of the face, a sense of fullness of the head, or severe attacks of cerebral congestion, with periods of confusion of ideas, or a dazed or stunned condition, when the patient may need, for a little while, the assistance of bystanders, and followed by a feeling of exhaustion, and perhaps tingling in the fingers, or numbness in them. Possibly there may be a slight defect in speech for a day or two. These attacks are parietic seizures in their simplest form. These early symptoms are more or less pronounced, and gradually lapse into the first stage of the confirmed appearance of the disease.

If at this time one's attention is called to a parietic, it would be a bad error to fail to appreciate the gravity of the symptoms and the probability of the presence of the disease, with warning words to the friends of the patient, and close watchfulness on our part. It is impossible to make the patient appreciate his condition.

As the disease advances there is an increase of the symptoms already spoken of. There is greater expansion of ideas, greater willfulness and self-contentment, a stronger determination of purpose with an ever-changing end in view, and an unwillingness to be guided or controlled by others.

In studying the symptoms of this stage, it must be remembered that they are both physical and mental, and that they are also

progressive. It must also be remembered that they do not always go hand in hand; nor is the progression continuous and constant; and that remissions may occur, so marked in some cases as to make those unacquainted with the disease suppose it is a recovery. It is an interesting question, and by no means a settled one, whether the physical symptoms first occur, or the mental. The mental changes, most frequently, are first noticed, probably because the attention is more easily attracted by them than by the minute symptoms first marking the physical changes; sometimes the physical symptoms are advanced while the mental symptoms are slow in appearing, and only a general sense of well-being, a want of appreciation and care for one's condition, and other slight changes of character, attract attention. On the other hand, the mental symptoms may be well developed while the physical are to be discovered by careful examination only.

In the earlier period of the first stage, the physical or paretic symptom, most constant and always to be looked for, is a slight change of speech. It may be so slight as to be noticed only by the accustomed ear; in its slightest form, it is simply the slurring of a word. As the difficulty advances there is a thickness of speech, a hesitating at certain words, and then their explosion. Frequently a word or syllable is left out or repeated. When plainly to be noticed, the speech is much like that of a drunken man. In cases of marked remission, a slight remnant of this defect of speech is generally to be noticed. If while the patient is speaking, or if he protrudes his tongue, you will frequently notice a peculiar twitching of skin and soft parts about the mouth, particularly at the corners and alongside the nose, and also a tremulous vernacular-like movement to the tongue. It may with difficulty be protruded and quickly drawn back. This ataxic condition may be very slight, and a good light and prolonged and careful examination, with a knowledge of just what to look for, is often necessary in order to discover slight changes. Sometimes these symptoms closely

resemble the appearance of the mouth of a person when about to weep. In more advanced cases, this tremulousness and twitching may extend to the whole face, and be plainly marked when it is in repose.

Inequality of the pupils is often noticed, one pupil being largely dilated.

The gait frequently shows change, there being the same want of co-ordination of the muscles of the extremities as are found in the face. If asked to walk, the patient will make an effort to do his best, but he soon shows peculiarities; the feet are somewhat separated and the gait may be called "wide;" he handles them carefully and places them on the floor with an effort to steady himself. As the disease progresses, he takes wide turns in going around corners, or if he stops suddenly, has to put out his hands to steady himself. The difficulty of walking gradually increases and the patient walks with outstretched hands, stumbling along and shuffling his feet. In the hands the fine movements of the fingers requiring co-ordination are lost. If a musician, the niceness to touch; if a mechanic, the ability to handle tools. The handwriting becomes altered; it is irregular, scratchy and angular; as in speech, words or syllables are left out or repeated.

If the mental symptoms keep pace with the physical, there is noticed greater activity; the patient is up early and goes to bed late; he walks the streets all day, intent upon business, he tells you, though really he does nothing. He becomes more boastful, perhaps speaks of increased wealth or that his next ventures will bring him much money. He is unwilling to be controlled, and perhaps becomes very violent if any attempt is made. He is contented and happy, and will tell you he is "first-rate," that he was never better in his life. Ideas of personal grandeur fill the paretic's brain. He is the strongest or most learned of men. His delusions are mostly self-centered, and if any one partakes of his favor they are bestowed by the paretic and become a part of his glory.

If, as the disease progresses, he is God, he makes his attendants angels, or if a king, nobles.

Sometimes, as has been said, marked self-contentment and feeling of well-being alone characterize the disease, with ever increasing dementia; and extravagant delusions, if they exist, have to be found by questioning the patient. Sometimes the history of paresis is that of a mental condition resembling melancholia, and they may even commit suicide. There are still present, the exaggerated ideas of the paretic, and relate wholly to himself. A melancholic paretic, now at the Buffalo asylum, thinks he is the devil, and has become so from his great wickedness. Sometimes they are cross, irritable and sullen, and treat all who approach them with haughty disdain.

The second stage is an exaggeration of the first. It may be passed quickly over and the patient sink into the dementia of the third stage, or it may be much prolonged, with remissions or stationary periods where there is little advance of the disease. Often great maniacal violence exists in this stage, but he is generally happy and contented. He shares his wealth and good fortune with his fellow-patients, and, if he feels the restraint of the asylum, is good natured, for he will say, "I am going home to-morrow." Often there is voracious appetite; and the food is stuffed into the mouth so that deaths occur from strangulation.

As the disease progresses and passes into the third stage, that of extreme paretic symptoms and advanced dementia, the delusions grow in magnitude, especially of his personal powers and greatness, while the increasing paralysis makes the boast and the reality only the more marked. If the patient lives long enough, the dementia approaches, as near as possible, to a condition of amnesia: unable to stand or walk, without any control over the sphincters, his life is wretched to all but himself: if he can give any evidence, it is that he is happy. Bed sores and extensive sloughing often take place; death may occur from gradual failure of vital powers or from inter-current disease, but

most often during a paretic seizure. These seizures now demand attention and deserve careful consideration. They occur in almost every case; It has never come within my observation to see a case where in some form it did not occur. They are way-marks in the history of a patient. Sometimes they are the first symptoms that really excite apprehension in the minds of friends. Their occurrence generally terminates a remission and ushers in the final end, and death frequently takes place during one of them. They are, as has before been said, either apoplectic, paralytic or epileptiform in character. In their simplest forms they often occur so early in the disease as to escape observation. If questioned, the friends will remember a day when the patient complained, in the morning, of weakness in the legs, and felt tired and remained quiet in the house for a day or two, or his speech was a little changed. If called at this time, examine for the ataxic symptoms of the face, for they are apt to be more pronounced. There may be a history of attacks resembling *petit mal*, and the patient complaining of being dizzy, will find locomotion impeded for several hours. If, with such attacks, there appear mental and physical symptoms as have been described, never mind how slight, one can hardly do wrong to diagnosticate paresis. As the disease advances, the severity of these attacks generally increases, and their appearance coincides with increase all the symptoms, sometimes life is fortunately ended in the second stage, by a severe apoplectic-like seizure. As the end approaches the attacks become more severe. When epileptiform convulsions occur they are sometimes most violent, and as many as a hundred may rapidly follow one another, before death takes place. The average length of the disease is about three years; sometimes it lasts two or three times as long, and in some cases but a few months after the full appearance of the symptoms.

In making a diagnosis, always bear in mind epilepsy with mania or dementia; also, ordinary paralysis with the different forms of insanity, especially paralysis and dementia.

Ordinary acute mania with extravagant delusions must be remembered, and sometimes a diagnosis for a time withheld. If, however, one always keeps in mind the peculiar association of ataxic and mental symptoms, carefully examines his patient and gets a good history from the friends, there is little danger of drawing wrong conclusions, though for a time it may be impossible to pronounce a positive diagnosis. Prolonged alcoholism sometimes causes a condition so like true paresis as to render an immediate diagnosis difficult. Time alone can make the distinction certain.

Much can be written about the morbid anatomy, but in a paper of this kind it would be out of place. If unaccustomed to examination of brains, one is apt to be surprised, after the marked clinical symptoms, to be unable to find coarse appearances beyond the usual "congestion" or "anæmia," or "hardened" or "softened" conditions, that makes up the knowledge of most of us.

To quote from an article by Dr. Zimmer, there will appear all that is valuable that can be condensed into the space at our command:

"Paresis is essentially an affection of the anterior portions of the cerebrum, of that part which the study of comparative anatomy and anthropology indicate to be the seat of intelligence, and which modern experimental investigation indicate to contain the motor centers. And it is the morbid manifestations of intelligence and of the motor functions occurring simultaneously and progressing correlatively that constitute the essential features of the disease.

"The pathological anatomy consists of changes in the membranes, more marked in the anterior regions, and changes in the cortical and subcortical substances, and chiefly the anterior cerebral convolutions; the minute changes in brain structure are still a matter of controversy." While the manifestations of symptoms are largely due to cortical and cerebral lesions, in many cases there is disease of the cord also.

Selections.

CONVULSIONS IN CHILDREN.

Infantile convulsions must always possess for the practical physician a keen, almost a fascinating interest. The cases are by no means of equal importance; some may be immediately dangerous to life; some may be merely symptomatic of diseases varying immensely in severity, and some may possess but little significance. As regards the symptom—convulsion—the phenomena are various. The convulsions may be general, and involve all the muscles of the animal life, or they may be limited to a single group of muscles. The symptomatic and the therapeutical diagnosis demand the clearest conception, the greatest fertility of resource, and the utmost promptitude of action.

As above suggested, a convulsion may mean much or little. At the outset, it is best to have as definite a conception as possible of what a convulsion is. That the pons varolii and medulla oblongata are centres of reflex actions has long been known, but it was reserved for Nothnagel to demonstrate the position and define the limits of the "spasm centre." Irritation of this centre induces general convulsions, and this irritation may be direct or reflex, centric or excentric. The results of experimental physiology receive support from pathology. Ladame, in his *Hirngeschwulste*, has formulated this conclusion: When the symptoms of brain tumor exist, if there are convulsions, the tumor is not in the medulla, which may be interpreted as follows:

When a tumor develops in a position to injure the spasm centre, convulsions become impossible because the injured part has lost its power of functionate.

Various causes increase the irritability of the spasm centre. Abnormal irritability may, indeed, be hereditary. It is well known that certain families exhibit the tendency to convulsions, and all the children may experience attacks, or they may be

confined to one sex. This tendency may be so strong that infants in the womb are affected, but it is in the first two years of infantile life that the greatest irritability of the spasm centre is found to exist. Beside this tendency, which is inherited, various constitutional states increase the liability to attacks of eclampsia. Rickets has a prominent position as a pathogenetic factor. This state acts, probably, by so increasing the irritability of the centres of reflex action that very slight peripheric irritation sets off the high-strung spasm centre. The state of nutrition of the child is not without influence. When much reduced by long illness, the reflex functions are correspondingly lowered, and hence when, under such circumstances, convulsions occur, it is reasonable to suppose that no peripheric irritation has sufficed, but that some "coarse lesion" of the intracranial organs is the cause. Hence it follows that the nutrition of the child suddenly attacked with convulsions has diagnostic value; if the child be fat and healthy, the convulsion is a symptom of some excentric irritation; if weak and emaciated it signifies some centric lesion, notably tuberculous. It is not affirmed that such a rule has no exceptions—only that it has diagnostic value.

It is important to distinguish between eclampsia and epilepsy. Age is an influential element. If a convulsion occur after four or five years of age, if it is over in ten minutes, and no cause can be discovered for it, these constitute good grounds for suspecting epilepsy. If the attack is accompanied by high fever, if albumen can be detected in the urine, or if some acute disease follow, the seizure is one of eclampsia, although the patient may be anywhere from two to ten. Again, the character of the attendant phenomena—the behavior of the convulsion itself—throws strong light on the diagnosis. When the convulsions are limited to the face, to one limb, to one side of the body, it may be concluded that the lesions are intra-cranial. Again, if any part, the seat of convulsion, the face, the limbs, etc., should continue paretic or paralyzed for some days after the seizure

or if a squint should continue, or an eyelid droop, or the pupils remain unequal, cerebral lesions probably exist.

The prognosis of convulsions is usually difficult. When arising from intra-cranial lesions, the prospect is gloomy. Such evidences of cerebral mischief as squinting, irregular pupils, coma, etc., are of evil omen. In the convulsions due to uræmic poisoning, the most unfavorable symptoms may be recovered from, but the case wears a less hopeful aspect the more persistent the failure of the urinary excretion. When the breathing continues labored, and there is deep cyanosis, with lividity of the face, and the pulse is very rapid, the case has a most unfavorable appearance. A convulsion at the onset of an acute affection, as scarlet fever, affords no certain indication of the future gravity of the disease, but does illustrate the mobility of the nervous centres. Convulsions occurring toward the close of an acute disease are unfavorable, and often signify that the disease has taken a more serious direction, or that tubercular meningitis has come on. In some children so irritable and mobile is the reflex centre of spasm that but trivial peripheral impressions suffice to bring on convulsions. Amongst other causes, are indigestible food, swollen gums, earache, etc. Such children may have repeated attacks, which, if known, must lessen the gravity of the prognosis. A guarded opinion should be given as respects the future condition of such children, for if convulsions occur readily during the first and even second dentition from slight causes, this is a reason for apprehending the subsequent occurrence of epilepsy. Habit is such an influential factor in determining attacks of nervous diseases that we may well be solicitous regarding its power here.

The treatment of convulsions has an importance determined entirely by the cause of the seizures. Is the attack merely an excited state of the spasm centre from simple peripheric irritation? Has the child eaten some indigestible food? Are there worms, irritating foods, scybala, etc., in the intestinal canal? Is there a stone in the bladder, preputial irritation, or other

source of irritation in the genito-urinary tract? Has sufficient urine been passed, and is the urine albuminous? Is an acute disease beginning, and is fever present? Has the child passed through an illness recently, especially of scarlatina or whooping cough? Is the child emaciated? Has the child rickets? The treatment is much influenced by the answers to these questions. Causes of irritation must be at once removed by emetics, purgatives, vermifuges, etc., as required. Then follow the measures to allay the excitability of the spasm centre: bromide of potassium, chloral hydrate, and the inhalation of chloroform. When time presses, the last-mentioned expedient has great value. It is sometimes advised to administer ether instead of chloroform, but this suggestion indicates a failure to appreciate the excitant qualities of the former. Chloroform is well borne by children, and is more effective than ether. Chloral, by the rectum, renders an incontestable service. It is safe in the case of children; it is effective, and, although not so prompt, is more sustained in action than chloroform. Bromide of potassium is most useful after consciousness is restored to prevent future or impending attacks, or to allay the excitement, muscular twitching, etc., which may indicate the onset of convulsions. When swallowing is impossible, bromide may also be given by enema, and it may be combined with chloral for all of the purposes for which the latter is applied. If the surface is cold, the circulation feeble and the skin dry, the child should be put in a bath 100 degrees Fahr. If the same conditions exist in a moist and clammy skin, dry heat should be used, the articles affording it having a temperature of 100 degrees also. If, on the other hand, the temperature of the child is high, reaching 103, 104, or 105 degrees, or more, the cold bath, or the cold wet pack should be employed without hesitation. The character of the bath prescribed will necessarily be affected by the state of the urinary secretion. If it is necessary to compensate in an increased action of the skin for the diminished activity of the kidneys, a warm or vapor bath may be necessary. If albuminuria exists, and the urine is very

scanty, the convulsions being distinctly uræmic, a very powerful action of the skin must be secured, and this can be effected by no measure so successfully as by pilocarpin. There can be no doubt of the great good accomplished by this remedy under these circumstances, but any prudent practitioner will avoid inducing a dangerous cardiac depression by the use of large doses. Compensation for the diminished urinary secretion can also be obtained by free catharsis.

We should not fail to mention the remarkable results obtained by Loomis in cases of uræmic convulsions, by the hypodermatic injection of full doses of morphia. Although such treatment has been applied to adults only, and may be inadmissible in children, it throws light on the therapeutical diagnosis. In the simplest cases, almost no treatment may be required. A child has eaten an indigestible meal, has a convulsion, and vomits freely. The stomach emptied, the nervous disturbance ceases, but it is always well in such cases to prescribe some bromide of potassium to allay the reflex irritability and the excitement of the spasm centre. Here, as under all circumstances, no treatment should be instituted that is not the result of a careful survey and a logical deduction from the facts.—*Medical News Editorial.*

INFANTILE LEUCORRHŒA.

Clinical lecture by Prof. T. Gaillard Thomas :

GENTLEMEN—The little girl, nine years old, whom I first bring before you, is suffering from a very profuse leucorrhœa, which, her mother informs me, she has been unable to cure by any of the remedies which she has employed, and which has now lasted for two months. I, of course, made a vaginal examination, and, on separating the labia, I found that the whole vulva was about the color of red flannel, and bathed with a copious leucorrhœal discharge. The meatus urinarius was also seen to be in the same condition, and urethritis has, no doubt, been set up by the

spreading of the irritation. If it had been necessary, I could have introduced a small glass speculum into the vagina; but this was not required to make a diagnosis, as I saw exactly what was the matter without resorting to this.

Not infrequently mothers will bring their little girls to you in this condition, and they will sometimes be in a state of great agitation, because they are afraid the trouble has been the result of injury done the children. There is ordinarily no reason whatever to suspect anything of the kind, and you can at once quiet the anxious mother's mind. The affection is a perfectly simple one, and is perfectly curable also. What is it, then? It is generally known as infantile leucorrhœa; but infantile vaginitis would be a better term for it.

Now as to its causes. One of the most frequent of these is neglect of hygienic precautions. There is generally no intentional neglect on the part of the mother or nurse; but, on account of the undeveloped condition of the part, an accumulation of hardened secretion sometimes collects in the same way as that which not infrequently gives rise to balanitis in the male child. Another common cause is the depreciated condition of the child's system, such as that due to spanæmia, in which all the mucous membranes are apt to become more or less affected. Thus, there is often gastric and intestinal, as well as nasal catarrh. A third cause that may be mentioned is reflex influence from the rectum. The cause of the irritation in the rectum is usually ascarides, and an afflux of blood to the part is caused by the itching and irritation.

In some instances, the ascarides, by getting into the vagina itself, are the direct cause of the trouble. The prognosis of this affection is, that it can be cured at once if it is properly treated.

In the treatment, the first thing to do is to see if there are any worms present, and if so (or there is any reason to suspect that such is the case), use an injection of warm salt water, as this form of ascaris (the *ascaris vermicularis*), as well as others, is unfavorably affected by salt. The next thing to do is to get the child's general system in the best condition possible by appro-

priate food, iron, vegetable tonics, and the hypophosphites. It is better to depend on nourishing diet, however, than on medicinal agents. If, after the worms have been gotten rid of, the vaginal irritation and discharge should continue, or if no worms should be found to be present, local treatment will be required. The vagina should be thoroughly washed out by means of a syringe provided with a small nozzle, which ought to be well oiled before being introduced. In order that the canal may be perfectly cleansed, the child should be placed upon the back. In some cases the mere removal of the accumulated secretion, which is a constant source of irritation, is all that is necessary; but if the trouble has gone on for some time, this may not be sufficient. Something further is then needed, and one of the best applications to use is the old-fashioned black wash (calomel and lime-water) in the strength of one ounce to a pint of water. Before using this (which should be done twice a day) an injection of simple warm water should be made. I have never yet seen a case of infantile leucorrhœa that could not be cured by such treatment as this; so that there is no necessity of resorting to astringents and nitrate of silver, which may perhaps do harm. If it is adopted here, I have no doubt that in less than two weeks this child will be entirely well.

But there is one mistake which is apt to be made by the physician in these cases, on account of which a much longer time may be required for a case than is at all necessary, and that is, the failure on his part to show the mother or nurse how to introduce the nozzle of the syringe properly. Mothers, unless they are especially instructed in regard to this point, never carry the nozzle more than an eighth of an inch up into the vagina, and as it is above this that the degenerating pus is found, there will be no improvement, simply because the injections fail to reach the real source of trouble. It is not enough even to show the mother how to use the syringe, but you should also watch her do it, and see that the upper part of the vagina is reached. In a child of this age, the rectal tube of a Davidson syringe should be employed.—*Medical and Surgical Reporter*.

RULE FOR EXAMINATION OF URINE.

1. Sediment in the urine has no significance unless deposited within twenty-four hours.

2. Albumen in the urine does not indicate kidney disease unless accompanied by tube-casts. The most fatal form of Bright's disease—contracted kidney—has little or no albumen.

3. Every white crystal in urine, regardless of shape, is a phosphate, except the oxalate of lime, which has its own peculiar form, urine alkaline.

4. Every yellow crystal is uric acid if the urine is acid, or a urate if the urine is alkaline.

5. Mucous casts, pus, and epithelium signify disease of the bladder (cystitis) or of other parts of the urinary tract, as determined by the variety of epithelium.

6. The urine from females can often be differentiated from the urine of the male, by finding in it the tessellated epithelium of the vagina.

7. Hyaline casts (narrow), blood, and epithelial casts signify acute catarrhal nephritis. Much albumen.

8. Broad hyaline casts and epithelial dark, granular and oil casts signify chronic catarrhal nephritis. At first, much albumen; later less.

9. Hyaline and pale granular casts and little or no albumen signify interstitial nephritis.

10. Broader casts are worse than narrow casts, as far as diagnosis is concerned, for the former signify a chronic disease.

11. The urine should be fresh for microscopical examination, as the micrococci will change hyaline casts into granular casts or devour them entirely in a short time.

12. Uric acid in the urine may, in Trommer's test for sugar, form a protoxide of copper, thus often deceiving the examiner in the belief that he has discovered sugar. Thus when urine shows only a trace of sugar, other methods of examinations besides the Trommer's must be used—preferably the lead test.

13. The microscope gives us better ideas of the exact condition of affairs in the examination of urine than the various chemical tests. Therefore the time has come when every true physician should know how to handle a microscope.—*Dr. Formad, Louisville Med. News.*

ADULTERATION OF BRANDY.

Some startling revelations have recently been made by the U. S. Consul at Rochelle regarding the quality of the liquor exported from France as brandy. He states that the whole business has become a gigantic fraud, and that little or no genuine brandy can be obtained, even by purchasers upon the spot. All the owners of large vineyards are distillers, and they are said to be heaping up colossal fortunes by manufacturing beet and potato spirit, which, by judicious diluting and flavoring, is made to resemble, in taste and appearance, brandy of any required age or make. When they sell brandy purporting to be twenty or thirty years old, or of a particular vintage, they simply mean that the article looks and tastes like genuine brandy of that stated age or vintage. The vile compounds with which the market is being flooded are highly injurious, not only from the irritating properties of fresh beet and potato spirit, but also from the poisonous qualities of the flavoring and coloring ingredients. As brandy ages, it loses its fiery properties, gains aroma and bouquet, and is then more suitable for medicinal purpose. Fresh new brandy should never be prescribed. It is therefore somewhat startling to learn that we cannot procure a genuine old brandy at any price, even from direct importers, and that we are probably prescribing for our patients the vile combinations of fraudulent French distillers instead of a bland and potent stimulant. If these corrupt practices are not speedily amended, the profession will have to seek elsewhere for a pure and reliable form of alcoholic stimulant, suitable for internal administration.—*Canada Medical Record.*

Society Reports.

BUFFALO MEDICAL AND SURGICAL ASSOCIATION.

Adjourned Regular Meeting, Tuesday, June 12th, 1883.

President, Dr. John Cronyn, in the Chair. Dr. C. M. Daniels, Secretary.

Present—Drs. Bartlett, Frank, Strong, Fell, Coakley, Brecht, Granger, Hopkins, Heath, Fowler, F. H. Potter, Hartwig, Barton, Moody, Hubbell, Howe, Crego, W. W. Potter, and, by invitation, Drs. Weil, Paulding, Bartlett, Jr., L. A. Bull, Messrs. H. Poole, C. D. Zimmerman and Miss B. Barrett.

Applications for membership received from Drs. Chas. Weil and H. E. Hayd, who were duly elected.

Essay by Dr. F. W. Bartlett; subject, "The Practical Utilization of Ozone in the Treatment of Disease."

Dr. Fell presented his notes of investigation upon the "Effects of Ozone upon Micro-organisms of Infusions," giving in detail the result of microscopical examinations, etc.

Discussion—Dr. Hartwig expressed himself as being pleased with the able and exhaustive paper. Although personally he had not investigated the subject sufficiently to determine its value, yet, with a little experience in typhoid fever, he had not been able to bring the mortality down to ten per cent., as the essayist stated had been done. Also mentioned that ozone itself had the property of inducing sleep.

Dr. Strong acknowledged his ignorance of the subject, and thought "confession was good for the soul." Considered that we had neglected this practical point in the treatment of disease. Also expressed his unbounded admiration for the fidelity with which Dr. Bartlett had pursued his investigations. He believed there was great merit and value in ozone, if practicable, and that young men should be encouraged to carry out these views and investigate further.

Dr. Hopkins said the association should put itself on record toward Dr. Bartlett regarding his investigations. He believed that whenever one went out of the beaten path to enlarge his scope of knowledge, he would be very sure to bring in something new and valuable. As far as his observations went it was not proven that disease was always cured by the agent used; also, that the statement of a certain per cent. of fatal cases caused confusion. As the exact percentage was very difficult to determine, many things might influence each individual case.

Dr. Heath stated that to him the paper seemed hardly specific enough. He should be pleased to know just how ozone acted, either in health or disease.

Dr. Howe was much interested, and said we have been taught that we should always be on our guard against receiving statements that had not been thoroughly sifted. It often seemed that just when we were getting at the bottom of facts, we diverged, and that further investigation upon ozone was eminently desirable. Asked Dr. Fell to explain what he meant by an "ozonized atmosphere."

Dr. Fell stated it was where ozone was present in sufficient quantity to be detected by the odor, and that air be respirable.

Dr. Howe further stated that it would be very desirable to know the degree and proportion of ozone used.

Dr. Hubbell said that a few years ago he made practical use of ozone in an epidemic of malignant diphtheria, but failed to get any direct beneficial results.

Dr. Hayd was somewhat surprised that results were sometimes so negative. To us as physicians the importance lay in the practical illustrations. Thought Dr. Fell's examinations not sufficiently clear to be accepted as positive results or authority.

Mr. Poole, in referring to the point raised by Drs. Howe and Heath, said that the amount of ozone was extremely difficult to determine. It had been stated by authority that five per cent. was the largest amount obtainable, although he thought it could be more, but not more than one-thousandth of its bulk.

Dr. Cronyn wished to pay Dr. Bartlett the compliment that his labor and pains deserved, although he was somewhat of an enthusiast. In this, as in others, proof being needed, he should find it exceedingly difficult to believe that all diseases could be cured by it. As to its value as a disinfectant, he had no doubt. Its history is a long one. Believed it had been found exceedingly useful in cholera, but injurious in pulmonary diseases. Thought it of value in crowded places, as hospitals, ships, etc. Considered that the papers of Schoenbein had fallen into disuse, and that much further investigation was needed to prove its true value in disease.

Dr. Bartlett was very much obliged to the association for the kindly manner in which his paper was received. He did not present it as being strictly scientific, as he could not detail, for want of time. He had been entirely original in his reports, having had no co-operation or aids in way of mechanical ingenuity. Had been liberal in every case cited, and his percentage of mortality given was rather under than above that stated. Said we were assuming as a fact that micro-organisms do damage, although the conditions were not understood, and that at times they are evidently quite harmless. Regarding the deodorant power of ozone, he believed that where it was used in sick rooms, contagious or infectious diseases were less likely to be transmitted. Also, exhibited and explained his generator, and said the amount of ozone could only be approximated.

Dr. Frank asked what was the temperature of ozone.

Dr. Bartlett stated it was not, as yet, ascertained, although it was destroyed at 185 degrees Fahrenheit. Believed it most active at ordinary temperature of the body.

Adjourned.

C. M. DANIELS, *Secretary*.

ERIE COUNTY MEDICAL SOCIETY.

The semi-annual of the Erie County Medical Society was held in the College building on the twelfth inst., the President, Dr. S. E. S. H. Nott, of Hamburg, in the Chair.

The minutes of the previous meeting were read and adopted. Dr. Dorland, chairman of the committee on membership, reported favorably regarding the following applicants and recommended that they be admitted to membership: Drs. F. H. Potter, Herman Hayd. J. W. Putnam, W. G. Gregory, E. H. Long, J. Wilmot Hunter and J. H. Pryor.

Applications for membership were received from Drs. R. A. Witthaus, William Meisburger, W. A. D. Montgomery, Burt. P. Hoyer, Benj. G. Long, Carlton R. Jewett, William H. Thornton, Claudius J. Niemand, Adelbert G. Gumar, Frederick W. Sweetland and Mary Berkes. They were referred to the committee.

Dr. H. R. Hopkins, as chairman of the special committee appointed to consider the passage of the bill establishing a State Board of Medical Examiners, presented the following preamble and resolutions:

Your committee upon which was laid the duty of urging the passing of the bill for the purpose of establishing a State Board of Examiners in Medicine, recently before our legislature, would report: That as soon as practicable after appointment, correspondence was instituted with the chairman of the committee on legislation of the New York State Medical Society, and with the members of your upper and lower branches of legislature. The result of this correspondence was to establish the probability of there being little chance for the bill passing at the present session, for the reason that the bill found a well-organized opposition, and upon its introduction in the senate was ordered before an adverse committee in which it was quietly strangled. At the time of the appointment of your committee, April 11th, it was too late to introduce new measures into the assembly such as the report of a committee. Your committee, in this forlorn condition, appealed to the Hon E. S. Hawley, member of assembly from this district, and this gentleman took the bill before the committee on general laws and had a hearing in its behalf. The bill was favorably received by the committee, but owing to the lateness of the session, they were unable to bring it before the house, and the session closed without having a chance to seriously consider the bill.

Your committee have reliable information fixing the opposition to this bill upon prominent members of our own profession, and as would naturally be supposed upon men who are largely responsible for the evils which the proposed measure was designed to correct.

Your committee is aware that reporting of failure has but little of encouragement, and gladly turns to other States where more persistent and vigorous effort has met deserved success.

The State Board of Health of Illinois is now in its sixth year of successful operation, and as this Board is the pioneer, so far as is known to your committee, it is thought that a brief reference to its plan of organization and work accomplished may not be without interest and encouragement.

This Board exists, by and under the laws of the State, since June 1, 1877, and consists of seven members appointed by the governor, who hold office for seven years. As now constituted there are on the Board two lawyers, three physicians, one homœopathic physician and one eclectic physician. Besides the usual duties pertaining to Boards of Health, this Board has the duty of enforcing the medical practice act of the State, under which it grants certificates, the holders of which are entitled to practice medicine in the State.

Such certificates are granted to graduates of medical schools in good standing, and to persons practicing in the State for ten years prior to the passage of the act, and to non-graduates after passing a satisfactory examination made by the Board.

The Board has also the power to declare what is unprofessional conduct and to revoke certificates in cases of parties guilty of such conduct. One of the most important of the powers of this Board is that by which it declares what medical schools are in good standing—that is, what diplomas give their holders the right to ask for license to practice medicine in the State of Illinois without further examination from the Board. For the information of those interested, the Board have fixed and announced a minimum standard of requirements for colleges wishing to be considered in "good standing." This requirement provides for, in addition to the usual conditions, a preliminary examination in the branches of a good English education, efficient instruction in hygiene and medical jurisprudence, besides the eight ordinary Chairs, a twenty weeks' course, two courses not in the same year, attendance upon at least eighty per cent. of all the lectures in the various courses, regular examinations by each teacher twice weekly, final examinations, to be conducted by competent examiners other than the teacher in each branch, two courses of dissection, and two terms of clinical and hospital instruction, three full years of study with preceptor; and, more important than all the rest, the school must show that it has a corps of competent teachers and ample facilities to carry out the above in a thorough and efficient manner.

In making this announcement, the Board regrets that it cannot adopt as the minimum standard that required by the best schools of the country, but recognizes that reforms in medical schools must be gradual. This Board reports annually to the American Medical Association, the physicians upon the Board being members of that association in good standing. From the last report to the association in print I gather the following statistics of this portion of the work:

When the Board began its work, there were in the State 7,400 doctors of all sorts.; of them only about 3,600 were graduates or licentiates of medicine. In 1882, instead of 3,800 non-graduates, there were only 935, and in 1883 less than 300, and most of them were exempt from prosecution by the ten-year practice clause. Nearly 3,000 irregular practitioners have been driven from the State, and the proportion of inhabitants to physicians has risen from 500 to 600 to one, to 800 or 900 to one. In 1882 charges of unprofessional conduct against physicians have been investigated in thirty-nine cases and licenses revoked in eighteen cases. The Board has rejected the diplomas of eighteen medical colleges as not in good standing, and there are forty-five more not yet passed upon, but which the Board thinks will show about the average per cent. of poor ones.

The Board makes full report quarterly and annually, and altogether shows an amount of work done most interesting in character and remarkable in extent.

An enthusiastic speaker, at the recent meeting of the A. M. A., said that this Board had done more to elevate the standard of medical education and efficiency in its short term of six years than the association had accomplished during the last quarter of a century.

During the last year the States of Missouri, Minnesota and Delaware have established similar Boards, the laws of the first two States being almost identical with that of Illinois, while that of the latter is quite similar. West Virginia also has a Board of Examiners and license, but this consists of physicians only.

Your committee deem this statement not unworthy the attention of this society, not alone for the remarkable results accomplished by the Illinois Board, but more particularly from the new and important principle involved in the formation of this and similar Boards. It is plainly to be seen that a Board to do the work done by that of Illinois must be endowed by law with full powers, and that no sectarian body is at all likely to receive such endowment. Such a body must represent what the people of the State consider to be the medical profession.

Your committee believes that this work should be continued, to the end that there may be presented to the next session of the legislature a bill similar to the one recently recommended by the society, that advantage be taken of the time between now and the end of the year to confer with the different medical societies in the State, with prominent citizens and public persons with a view of securing their co-operation in assisting the passage of this proposed bill.

To this end your committee would offer and recommend the adoption of the following resolutions:

THE RESOLUTIONS.

Resolved, That it is the belief of this society that the present method of training and licensing physicians does not command the entire confidence of the profession or of the people.

Second—That the system of licensing physicians by a State Board of Examiners, representing the legally authorized medical profession, as seen in operation during the past six years in the State of Illinois, is a decided improvement upon that now pursued in this State.

Third—That this society hereby endorses the principle seen in the formation of mixed boards of examiners, that is, boards giving in one body *pro rata* representation to all the different schools of legally authorized physicians, and believes that it is through the agency of such boards that the standard of medical education may be most efficiently advanced, the profession most advantageously controlled and its ranks recruited by the admission only of persons worthy of its high responsibilities.

Fourth—That this society hereby pledges its best ability and endeavor to the cause of securing to the people of this State the services of such a board of examiners.

Fifth—That to this end a committee of seven members be appointed at this meeting to be known as the committee on legislation, and that this committee have full charge of this matter with power to call special meetings of this society, to confer, in the name of this society, with other societies and with individuals upon matters germane to this subject, to draw orders upon the treasury of this society in sums not to exceed \$100 for all legitimate expenses incurred in the prosecution of this work, and with such other power as rightly used would, in its judgment, aid to bring about this greatly desired end.

The third resolution met with considerable opposition. The idea of a "Mixed Board" was not received favorably by many of the older members present. It was warmly discussed and finally carried by a very close vote, thirty-two to thirty.

In accordance with the resolutions, the Chair appointed, as a committee on legislation, Drs. John Hauenstein, W. D. Mann, F. S. Crego, Edward Storck, A. R. Davidson, H. R. Hopkins, A. H. Briggs.

Doctor Storck, chairman of the Board of Censors, presented the following report, which was received and the recommendations adopted :

In accordance with a resolution passed at a former meeting of the society, directing the Board to prepare a list of names of physicians practicing in the county, who have failed to register in the County Clerk's office, also the names of persons practicing without diploma or license, and prosecute such persons before a proper tribunal, the Board, on complaint of the president of the society, brought three cases before the police court, to be tried under the new penal code of the State, with the following result :

The first, Louis Beyerman, an ignorant quack, who had resided in Buffalo but a short time, through advertisements acquired a large practice and extorted large sums of money from his patients, and through malpractice, in several cases, had made himself guilty of manslaughter, plead guilty of the charge and was fined \$50.00 by Judge King, who gave him the advice to leave town forthwith.

The second, Dr. Evans, a traveling doctor, who advertised himself as a *magnetic-healer*; he had registered a diploma of an Ohio medical college, and claimed to possess another one of Philadelphia. After he had received considerable money of his confiding patients, he was taken before Justice King, on a charge of practicing under cover of a diploma fraudently obtained. He was granted an adjournment of several days, but when the case was called again, the magnetic-healer had taken to his heels, leaving his security, \$200.00 in cash, for the benefit of the city treasury.

In the third case, the defendant plead guilty of the charge of dealing out medicines, but as he claimed not to be a doctor and promised not to attempt to practice hereafter, Judge King suspended sentence, with the advice: to go and sin no more.

After your Board, together with the Censors of the Erie County Homœopathic Medical Society, had examined the registry and prepared a list of those who are thought to practice illegally in this county, which was partly published by the daily press, deferred further action and postponed the prosecution of such persons, until the question was decided whether an act passed by the last legislature by which a certain institution in this city that pretends to operate as a medical college under a charter twice invalidated by decisions of the courts was to be legalized and the incorporation made valid, would become a law by receiving the signature of the governor.

It would have been a useless task for your Board to proceed against these persons, practicing in violation of the law, many of whom are on the list of matriculants of said medical college, and would have been graduated and made legal practitioners in a very short time. Your Board would have asked the society to be discharged from further duties in this direction.

After having received official notice that the governor had not sanctioned the law as passed by the legislature, the Board resumed its labors, and together with the Censors of the other county medical society, decided to carry the law into effect against all illegal practitioners. A notice to this effect, together with a copy of the respective sections of the law and penal code of the State, will be addressed to all persons whom the Censors have reported at their last meeting, and prompt prosecution instituted against those who practice without having complied with the requirements of the law.

Your Board of Censors would ask of the society to be empowered to employ legal counsel and to take such action as may be necessary to restrain any il-

legal medical college in this county from issuing diplomas; also, ask for the necessary funds to carry the action through.

EDWARD STORCK, *Chairman.*

ANDREW D. MANN,

A. H. BRIGGS,

F. H. HOYER,

Board of Censors.

A vote of thanks was extended to the Board of Censors for the energetic and faithful manner in which they had thus far carried out their work. The Treasurer was directed to pay, on the order of the President of the society, amounts not to exceed one hundred dollars to defray the expenses of the Board.

Dr. P. W. Van Peyma being absent in Europe, Dr. H. R. Hopkins was appointed to act on the Board of Censors in his place.

At the afternoon session, Dr. Henry Nichell read an extremely interesting and practical paper regarding the code of ethics of the State Medical Society. The paper received the hearty endorsement of Professor Rochester, and all of the members present.

A vote of thanks was tendered the doctor, and a copy of the paper requested for publication in the BUFFALO MEDICAL JOURNAL.

On motion the society adjourned.

A. M. BARKER, *Secretary.*

Editorial.

A State Board of Examiners, the greatest need of the Medical Profession in the State of New York—A "Mixed Board" the only efficient one attainable under present conditions.

SOMETHING WORTH FIGHTING FOR.

We ask the especial attention of our readers to the report of the proceedings of the Erie County Medical Society contained in this issue. The feature of the meeting was the action upon the resolutions relative to the appointment of a "State Board of

Examiners." The question which divided the society was, as to the endorsement of the principle of "Mixed Boards."

There was no division of sentiment as to the necessity of a State Board of Examiners, and there was a perfect unanimity in the vote upon the second resolution, providing for a mixed Board like that of Illinois. But the frank endorsement of the principle upon which that Board is founded, and without which it would be not only futile, but impossible to have an effective Board at all, was warmly contested, and carried by a small majority.

It is not easy to satisfactorily explain the division which took place over the third resolution in view of the entire unanimity with which the second resolution was carried; but we think that the real feeling and sentiment of the society upon the question is evinced by the unanimous passage of the second resolution.

The JOURNAL is in favor of each and all of the resolutions as passed, and we are so, because we realize that the society has taken the initial step in a great work for a great cause, and it is expedient and necessary that there should be made and announced a platform plainly setting forth the principles to be maintained, and which can not be tortured by its enemies into a mere manifestation of sectarianism. We rejoice that the Erie County Society has had the honor of taking the initiative in this matter. We propose to support them in it with all our power, and we believe that when the matter is fairly put before the profession and the public, the movement will receive so earnest and hearty a support as will ensure the passage of a law creating such a Board, and endowing it with full power to raise the profession of medicine above the degrading influence of cheap and purchased diplomas. We hope to see the time when medical men shall win from all the acknowledgement that theirs is a learned, an efficient, a capable and a liberal profession; but we believe that such a recognition will be neither deserved nor won until there shall come a complete separation of the unfortunate, un-

wise and debasing co-partnership of the educating and the licensing powers. That this movement will receive the strongest opposition from the medical schools is undoubtedly true, and it would be idle to ignore the power which will be exerted by the well-organized and determined opposition of corporate bodies backed with an abundance of money and a willingness to use it freely to accomplish their ends. It is not, perhaps, safe to count upon it, but let us hope that at least some of the better colleges will place the interests of the profession above the desire for "filthy lucre" and throw their influence upon the side of right. It is but justice to the Buffalo Medical College to say that every member of the faculty present at the meeting voted for a State Examining Board. We hope that our college will join with the Erie County Society in leading the van in the coming battle for the elevation of the profession.

THE AMERICAN MEDICAL ASSOCIATION.

The thirty-fourth annual meeting of this association, held in Cleveland June 5th to 8th, inclusive, was very largely attended, eleven hundred delegates and permanent members having signed the register.

It is a question how many "strained their consciences" or considered it right to simply ignore the clause requiring entire agreement with the old Code, which had been interpolated by the "Judicial Counsel" and which is referred to by a valued exchange as "a dexterity by which all ethical rebels were strangled at the door so that none succeeded in crossing the sacred æsculapian threshold, and the shades of Hippocrates suffered no dishonor." The writer is not a supporter of the "New Code," but we are always on the side of friendly and free discussion, and we must decidedly protest at the "dexterity" by which this was strangled. It is an impertinence to the members of the association to assume that they can never change or modify their views, and

that having, perhaps years ago, honestly pledged themselves to the present Code, they are not at liberty to as honestly change their minds and by all proper means to advocate their views in the association. The action of the "Judicial Counsel" virtually deprived every permanent member, whose views had so changed, of his rights and privileges in the association, and it is a discredit to the majority that such an outrage upon the rights of a few should have been permitted. Such action gives to the advocates of the New Code the best apology for the unfortunate position assumed by the New York State Society, and furthermore, will tend more powerfully than argument to draw fair-minded men to their side.

The election of Dr. Austin Flint to the presidency will be a gratification to all medical men, but can add little to the honors with which he is already crowned. In Europe, as here, he is recognized as the foremost medical man in America. One of the most important matters accomplished at the meeting was that relating to the journalizing of the transactions. Under the able and experienced editorship of Dr. N. S. Davis, we can confidently predict that the Journal will be a fit representative of the American Medical Association. The first number is expected to appear early in July, and as it will undoubtedly reach most of our subscribers, we have omitted our usual report of the proceedings of the association, which otherwise we would have felt it necessary to publish.

THE COMMITTEE ON LEGISLATION.

This committee has begun its work with method and determination. Correspondence was at once instituted with the authorities of every State in the Union having a medical practice act, and with the proper officer of all established Boards, asking for information upon the practical workings of their respective bodies. The information thus gathered, the

committee hope to embody in a bill, and is confident that when such a bill is prepared, it will be worthy of the support of the profession. We trust that in our next issue we can give our readers at least a synopsis of what we firmly believe will be the most important medical law of this State.

The fact that State Examining Boards are now in operation in Illinois, West Virginia, North Carolina, Alabama, Delaware, Minnesota and Missouri, in a great measure simplifies the labor of preparing such a bill for our own State, and also furnishes an incentive for vigorous action in this direction. The profession of the Empire State should not be the last to take this important step, and we are glad that the physicians of Erie county have inaugurated the movement.

Reviews.

A Manual of Histology. Edited and prepared by THOMAS E. SATTERTHWAITE, M. D., Professor of Histological and Pathological Anatomy in the New York Post Graduate Medical College; Pathologist to the St. Luke's and Presbyterian Hospitals. Second edition, enlarged and revised, containing 202 illustrations, with an appendix. New York: Wm. Wood & Co., No. 56 and 58 Lafayette Place.

When the first edition of this work appeared it was received with almost unanimous favor by the reviewers, and the profession have added their marked commendation by so soon exhausting the first edition. The changes in this volume are necessarily few, for the first edition was well up with the knowledge of the day, and but little has been added in the short time that has elapsed since its publication. Some textual errors have been corrected, and an appendix added, giving the latest contributions on the subjects of "The Lymphatic System" and "The Salivary Glands." We anticipate that a third edition of the book will be soon called for.

A Practical Treatise on Impotence, Sterility and Allied Disorders of the Male Sexual Organs. By SAMUEL W. GROSS, A. M., M. D., Professor of Surgery in Jefferson Medical College of Philadelphia. Second edition, thoroughly revised, with sixteen illustrations. Philadelphia: H. C. Lea's Son & Co. 1883.

This little book supplies, in a compact form, practical and strictly scientific information especially adapted to the wants of the general practitioner, in regard to a class of common and grave disorders upon the correction of which so much of human happiness depends. The writer shows a thorough familiarity with recent research into the scattered literature of this subject, and we regard the book as one of the highest value to the physician. It is excellently printed and sufficiently illustrated.

A Treatise on Therapeutics, Comprising Materia Medica and Toxicology, with Especial Reference to the Application of the Physiological Action of Drugs to Clinical Medicine. By H. C. WOOD, M. D., Professor of Materia Medica and Therapeutics, and Clinical Professor of Diseases of the Nervous System, in the University of Pennsylvania; Physician to the Philadelphia Hospital, etc., etc. Fifth edition, revised and enlarged. Philadelphia: T. B. Lippincott & Co. 1883.

No one who has paid much attention to the study of therapeutics is ignorant of this leading text-book on the subject. The demand for the work seems to be on the increase, for the fourth edition was exhausted in about six months after publication. This fifth edition represents, more thoroughly than ever, the best therapeutic thought of the day and is fully up to the times. The book is open to the objection that too much space is occupied in giving the views of various experimenters whose results are often the most opposite; but though this may be a drawback to its use as a mere text-book for the student, it adds greatly to its value for the physicians really interested in the subject. One would like to read more of the author's own experiments, and less conservative expressions on many debatable subjects; but the book is not one to find fault with. In its especial field it is unequalled in any language, and no library is complete without it.

THE BUFFALO Medical and Surgical Journal.

EDITORS:

THOS. LOTHROP, M. D.,

A. R. DAVIDSON, M. D.,

P. W. VAN PEYMA, M. D.,

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CITY OF NEW YORK.

SESSION OF 1882-83.

THE COLLEGIATE YEAR in this Institution embraces the Regular Winter Session and a Spring Session. The REGULAR SESSION will begin on Wednesday, September 20, 1882, and end about the middle of March, 1883. During this Session, in addition to four didactic lectures on every week-day except Saturday, two or three hours are daily allotted to clinical instruction. Attendance upon two regular courses of lectures is required for graduation. The SPRING SESSION consists chiefly of recitations from Text-Books. This Session begins about the middle of March and continues until the middle of June. During this Session, daily recitations in all the departments are held by a corps of Examiners appointed by the Faculty. Short courses of lectures are given on special subjects, and regular clinics are held in the Hospital and in the College building.

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FEES FOR THE SPRING SESSION.

Matriculation (Ticket valid for the following Winter)	\$ 5 00
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For the Annual Circular and Catalogue, giving regulations for graduation and other information, address Prof. AUSTIN FLINT, JR., Secretary, Bellevue Hospital Med. College.

University of Buffalo.

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Wednesday, September, (27th), and continues twenty-two weeks.

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The Medical Clinics, held at both hospitals, are under the charge of Professor Thomas F. Rochester, whom the students accompany in visits to the hospital wards, where opportunity is presented for the close personal observation and examination of disease, and by whom clinical instruction in diagnosis and treatment is given at the bedside and hospital amphitheatre.

The Clinics in Surgery are held at both hospitals and at the surgical lecture rooms of the College, under direction of Professor Julius F. Miner, where extensive opportunities for observation of surgical and venereal diseases, fractures and dislocations, are afforded, and in the amphitheatres of which are performed all important operations in general surgery, ophthalmology and orthopedy. Medical and Surgical Clinics are held every Wednesday and Saturday during the term.

The course in Physiology, by Professor William H. Mason, is illustrated by abundant vivisectional and demonstrative experiments.

The various departments of instruction are under the charge of energetic and able teachers, who are fully abreast with the times and who endeavor to present recent and enlightened views, and to impart thorough, practical information in the duties of the Profession.

The Museum of the College contains a large number of morbid specimens, casts and interesting preparations, which are made available in the several departments.

Ample facilities for the practical study of Anatomy are afforded in spacious and well lighted Dissecting Rooms, where abundant material may be had at low rates.

The Demonstrator will be in daily attendance and the Dissecting-rooms will be open during the first ten weeks of the Course.

The fee for the Tickets of all the Professors amounts to \$100. Matriculation fee: (annually) \$5.00. For those who have attended two courses elsewhere the fee is \$50.00. The alumni of this College are entitled to perpetual free admission. All who have attended two full courses at this institution, are entitled to all the tickets on Matriculating. Perpetual Ticket \$150.00, admitting the owner to as many courses as he wishes to attend.

No hospital fees are required; the Faculty assuming to pay for the admission of all members of the class, without extra charge to them.

Graduation fee \$25.00. Graduates of any respectable college, after three years' practice, will receive all the tickets on payment of the matriculation fee.

The fee for the ticket of the demonstrator of anatomy is \$5.00, which is optional except for one term before graduation.

Board can be obtained in respectable families at from \$4.00 to \$6.00 per week.

For further information or circular, address

CHARLES CARY, M. D.,

219 DELAWARE ST.,

BUFFALO, March, 1882.

Dean of the Faculty.

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Buffalo medical journal

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